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About Our Authors . . .

The feature article of this issue is a thorough summary of the implications of prairie oil. The author, **Ronald S. Ritchie**, is the Assistant Manager of the Co-ordination and Economics Department of Imperial Oil Limited. Mr. Ritchie studied economics at Western and Queen's and, in addition to teaching economics at the Ontario Agricultural College, served on the Wartime Prices and Trade Board.

Attempts to ensure efficient operation of the large departments of present-day government through management analysis is the subject of a discussion by **C. James Gardner.** A native of England, Mr. Gardner was educated at McMaster University and the University of London. He has worked for both the British and the Canadian Governments in planning war production, and has been engaged in the manufacture and sale of engineering products.

Maintaining the health of busy executives is the subject of an article by **Dr. George E. Hobbs,** Assistant Dean of Western's Medical School. In addition to his administrative position, Dr. Hobbs is Professor of Clinical Preventive Medicine. He is an M.D. from Toronto and has also studied at Harvard and Michigan. During the war, he served with the Canadian Army in various capacities, including Consultant to the Director of General Medical Services.

What is an economist's appraisal of current conditions in some of the basic consumer goods industries? **Gordon K. Goundrey** of the Department of Economics, McMaster University, presents his views concerning this subject. Mr. Goundrey, who graduated from the University of British Columbia, taught at Toronto before going to McMaster and has been associated with several companies in the canning industry.

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About Our Authors . . .

Every traveller is all too familiar with "billboards", but few, perhaps, are familiar with the outdoor advertising industry which operates them. This industry is the subject of an article by **Mace Mair**. At present Mr. Mair is is General Manager of the Poster Advertising Association of Canada. He has also been an active member of the Association of Canadian Advertisers. In addition to holding positions in the sales departments of several Canadian and American companies, he has served as a hockey reporter for the *Chicago Evening Post* and, for six years, with the R.C.A.F. and the R.A.F. He received the Order of the British Empire for his work in organizing the identification of missing airmen.

The differences between normal corporate accounting practice and that required by various government laws and regulations are discussed by **Dr. A. A. Sterns**, Chief Supervisor of the General Section, Cost Inspection and Audit Division in the Office of the Comptroller of the Treasury. Dr. Sterns, a native of Czechoslovakia, was educated in various European universities, lectured at Prague University, and held various positions in industry before coming to Canada as a political emigrant. In addition to his present government position, he is a Lecturer in accounting at Carleton College.

Finally, we present a summary of recent developments in the field of accident prevention by **R. G. D. Anderson**, General Manager of the Industrial Accident Prevention Associations. Readers may be familiar with the convention of the Association held in Toronto on April 21st and 22nd. Mr. Anderson's business career has been spent primarily in sales and advertising, but he became interested in accident prevention while working at John Labatt Ltd. in London and progressed to his present position.

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Western Oil:

Its Economic Implications

Ronald D. Ritchie

In this colourful analysis, Mr. Ritchie discusses the rapid change in the Canadian economy brought about by the sudden impact of the discovery of oil in the West and reflects upon possible future developments.

CANADIANS who follow the progress of their country's economy can hardly be blamed these days if they should come to the conclusion that the foot of the rainbow has in some mysterious way moved across the border into Canada. In our school days we were all accustomed to hearing Canada's great natural resources described with a peculiar nationalistic fervour which somehow was never able to dispel entirely the nagging questions stimulated in our minds at a later stage by the very obvious differences between our own standard of living and that of our neighbours to the south. Now, however, the situation is changing — and changing rapidly.

In the past dozen years since the beginning of World War II Canada's national income has more than doubled in physical terms. From being an agricultural economy open to all the buffetings of the world market for farm products, we have moved speedily towards the position of a highly industrialized economy with a domestic market sufficient in itself to provide a valuable element of stability for many of our agricultural products. The text book list of our natural resources has suddenly become much more concrete and important in its effects on the Canadian economy. With additions such as iron ore, oil, and uranium which the text books did not foresee, it is now providing a growing range of export products which promise to be in strong demand in the United States and abroad for a good many years to come.

In the postwar period, developments in the Canadian economy have been nothing short of startling, both quantitatively and qualitatively. Despite a large defence effort, we are currently in the midst of a resource development program which involves most of the major raw materials and products of which the world is likely to stand in dire need over the next decades—iron ore, nickel, lead, copper, zinc, silver, asbestos, lumber,

wood pulp and newsprint, aluminum, petroleum and natural gas, petrochemicals, synthetic fibres, and plastics.

Along with this program of physical and economic development, we have pursued a fiscal and monetary program which has gained widespread approval in international financial circles. Partly because of this approval and partly because of the soundness of the policy and the real strength of the economy, the Canadian dollar is now one of the three "hard" currencies in the world and even conservative Swiss bankers are joining American investors in supplying capital for developing enterprises in Canada. With some help in the way of such outside funds, Canadians have recently been devoting as much as one-quarter of their total annual output to capital purposes.

Among all these spectacular developments in the Canadian economy, none has attracted more attention both domestically and internationally than the discovery and development of new and potentially very large crude oil reserves in the Prairies. This interest has in many cases been translated into direct investment by individuals both in Canada and abroad, as evidenced by the number of exploration and development companies which have been able to obtain some degree of public financing. Part of the interest in Canada's new role as a crude oil producer of consequence lies, of course, in the significance of this whole development for Canada's economy. Part of it lies in its economic and strategic significance for the North American Continent as a whole. In addition to having economic consequences (and a political aspect which is inevitable when the interests of two nations are involved), the development of Prairie crude reserves is itself subject to certain fundamental economic influences. These economic factors have shaped its progress to date and will be important determinants of its future.

It is the purpose of this article to consider some of these economic factors and to assess the significance of Prairie crude for Canada and the United States.

The Economics of Location

A vital factor in the economics of Prairie crude is the element of location. To put the significance of this factor in perspective it is helpful to compare the picture before the discovery of substantial Prairie crude reserves with what has already been achieved and with what is likely to be achieved in the future.

In February, 1947, when the Leduc discovery well came in, the Prairies were facing a rather bleak prospect petroleumwise. On one hand, as a relatively sparsely populated but heavily mechanized agricultural area, the Prairies had expanded their petroleum requirements per capita beyond the levels reached by the more industrialized East. On the other, as a result of the rapid depletion of Turner Valley reserves during the war plus this rapidly growing demand, the point had been reached where

two-thirds of the requirement had to be met through costly rail hauls from outside sources. Crude oil to fill out existing Prairie refinery capacity had to be railed from as far afield as Oklahoma, Louisiana, and Texas, while refined products to meet the balance of the demand had to be obtained from Ontario and Montreal refineries. This meant that the Prairies were an area of high cost petroleum products, a fact of no little significance to the competitive position of Prairie agriculture in world markets.

This situation had one further corollary of significance. Because crude oil for refining in the Prairies was difficult to obtain and very costly, there was little or no incentive to expand Prairie refinery capacity beyond the levels already reached a few years earlier when Turner Valley crude was more abundant. As a result, Prairie dependence on outside refineries for products was becoming greater as requirements grew. At the very time of the Leduc discovery, refinery capacity in Montreal was being expanded to supply increasing Prairie needs.

In the intervening five years, crude oil reserves in the Prairies have risen to 1.5 billion barrels, and the Prairies are well past the stage of self-sufficiency in both crude and refined products. Crude has now been moving out beyond the Prairies for a full year. In this new situation the location factor operates almost exactly in reverse as far as the Prairies are concerned.

Just as in its pre-Leduc days, the Prairie area is still on the periphery, physically speaking, of that vast and complicated series of supply and demand arrangements which constitute the world oil market. But where the Prairies were earlier in the position of *buyers,* having to pay expensive transportation charges for products, they are now in the position of *sellers,* forced to subtract the costs of transportation from the price which they can obtain for their crude in competition with other crudes in distant markets. Today these markets are Ontario refiners who are substituting Prairie crude for American Mid-Continent crudes on which they formerly depended. In 1954, British Columbia refineries will enter the picture, and perhaps eventually United States West Coast refineries which have not yet been built. Before Prairie crude can compete at all in such markets, efficient pipeline transportation has had to be provided to overcome the obstacles of great land distances between Edmonton area fields and the refinery markets. However, even after the most efficient transportation has been provided, in the shape of an Interprovincial or a Trans-Mountain pipeline, the Prairie producer finds that his crude must sell at the wellhead at from 10 cents to more than 20 cents per barrel less than the wellhead price of comparable crudes in major American fields.

This reverse effect of transportation costs, which showed up as soon as the Prairies moved from deficiency to surplus in terms of local crude

supplies, has had a very substantial influence in petroleum products prices in the Prairies. Most Prairie farmers and other consumers of gasoline and heating oil now find that their products cost them less than the corresponding prices in Ontario or Quebec. Calculated against the prices they would theoretically be paying had the Prairie crude discoveries not been made, they are reaping benefits equivalent to $25.00 per year for every man, woman, and child in the Prairies. Savings such as these have a very real importance for the competitive position of Prairie agriculture and thereby in an indirect way for the whole Canadian economy.

In addition to producing this price reversal which has worked to the advantage of Prairie consumers, the transportation and location factor has also reversed the position on Prairie refining capacity. In pre-Leduc days there was little or no incentive to construct refinery capacity in the Prairies, with the result that the area was moving further and further from self-sufficiency. Now the position has been reversed. In face of the lower prices now ruling, refined products from outside the Prairies can no longer compete in the area. Self-sufficiency in refining capacity has become a necessity.

This new situation has had rapid and spectacular results. Edmonton, which prior to mid-1947 had no refining capacity, is now the largest refining centre in the Prairies. Constructon already completed at Winnipeg, plus planned projects, are rapidly making Winnipeg an important refining centre. Regina area refineries have expanded. Only Calgary, once the chief refining centre of the Prairies, has received no corresponding stimulus from the new crude discoveries, partly because Turner Valley production continues to decline and partly because no sizeable new discoveries have yet been proved in the Calgary area. From a level of 39,000 barrels daily in early 1947, Prairie refining capacity had risen to 122,000 barrels daily by 1951. Investment in refining capacity alone in the Prairies in the past five years for expansion and modernization totalled more than $50,000,000.

The factor of location and transportation costs must continue to have a fundamental influence on the scale and direction of the development of Prairie crude reserves. As new markets become desirable to provide sufficient crude outlet, Prairie producers find certain obstacles to be overcome. There is first of all, the normal tendency for transportation costs to rise as crude moves to more distant markets. There is secondly the increasing competitive pressure from alternative crude sources as Prairie crude reaches farther into the existing territory of other major crude producing areas. Finally, there is the United States duty which must be borne on any movement to a United States refinery. With sufficient volume and the most efficient transportation, these factors are unlikely either singly or in combination to place serious barriers in the way of Prairie crude reaching desirable markets.

Combined with the fact that wellhead values of Prairie crude are already below those of comparable crudes in other major North American fields, they do, however, underline the importance of such factors as transportation cost and the level of the United States tariff for both the incentive to develop Canadian reserves and the direction in which they seek additional outlets. It follows very clearly that Prairie crude must always move to desirable markets by the most efficient, i.e. the least costly, means of transportation. This will usually mean a large pipeline over the most direct and shortest possible route.

Repercussions on the Prairie Economy

The discovery and development of Prairie crude has already had a number of significant influences on the Prairie economy besides those noted above. Although the Prairies as an area were rich in energy resources even before the discovery of major crude oil reserves, a marked shift in the pattern of fuel consumption is already apparent within the local economy. Some 300 railroad locomotives have been converted from coal to residual fuel. This development reflects the greater economies to be achieved in operation when fuel oil is available for steam locomotives at reasonable prices, as well as the greatly expanded supplies of heavy fuel oil in the Prairies resulting from increased refinery runs. Despite a growth in heavy fuel production from 2,100,000 barrels in 1946 to 5,700,000 barrels in 1951, supplies have not been able to keep pace with demands of railroad locomotives, industrial plants, and electrical generating plants.

Similarly, expanded refining capacity has brought a large increase in the available supply of domestic heating oils. Despite competition from plentiful and cheap coal and, of course, from gas, these expanded supplies of heating oil have been barely sufficient to keep up with demand, due partly to the low prices now ruling and partly to the demand of prosperous Prairie farmers for the convenience factor which goes with oil heat.

A third interesting change in the pattern of fuel consumption has been the rapidly growing place of propane in the Prairie picture. Small quantities of propane were imported beginning shortly after the discovery of Leduc. However, these import supplies have rapidly given way to local production such as that from the Devon gas plant at Leduc, a conservation project which recovers liquid fractions from gas associated with Leduc crude production, thus making both the liquid petroleum products and the dried gas available for the market. These local supplies will doubtless expand much further as and when the Alberta Government approves substantial new outlets for Prairie natural gas. Under the stimulus of ample supplies, propane has found growing markets as a cooking and water heating fuel in rural homes and as fuel for

Edmonton's bus fleet. If American developments point the way, it may shortly power a sizeable portion of Prairie tractors.

From the moment it became apparent that Prairie crude reserves would be of a significant size, an important question for the Prairies and for Canada has been: Will oil and natural gas provide the basis for industrialization in the Prairies? It was only reasonable that the example of Texas, once primarily an agricultural area, transformed by oil into one of the great industrial centres of the United States, should be well to the fore.

It was, of course, realized that circumstances might not be quite so favourable in Alberta, despite the abundance of cheap fuel and raw materials provided by oil and natural gas. As one important barrier, there was the same factor of location and transportation costs which oil itself has had to face. Whereas Texas has been able to develop a huge chemical industry based on oil and gas by finding outlets for its products in the markets of the East via cheap water transportation, Alberta would have to suffer the drawback of heavy land transportation costs over long distances to the nearest large markets available. It was obvious that for some long time to come the local Prairie market for most potential products (outside petroleum and natural gas directly) would be small.

Today this uncertainty has been partly resolved. Two large-scale petrochemical plants are under construction in the Edmonton area, one tied for its raw materials to the by-product gases of local refineries and to butane recovered from the gas conservation project at Leduc, the other tied to natural gas discovered during the search for oil. The first of these plants will combine part of its petrochemical output, acetic acid, with wood pulp from an affiliated plant in British Columbia to produce 25 million pounds of cellulose acetate per year. A third project at nearby Fort Saskatchewan will in a few years' time be utilizing vast quantities of natural gas for the refining of nickel railed from Lynn Lake in Northern Manitoba. In this plant, natural gas will also provide fuel and raw material for producing copper sulphide, refined cobalt, and ammonium sulphate fertilizer. At Calgary a commercial explosives plant is now being constructed to use ammonia from natural gas as a basic raw material. No one of these projects will be catering primarily to a Prairie market.

It has become clear, therefore, that there are certain chemical and other industrial operations which are likely to gravitate to Alberta as a result of crude oil and natural gas discoveries. The likelihood is, however, that for some time to come such projects will be limited to those for which an abundant and cheap supply of raw material is a substantially more important factor than transportation costs of the finished product. In any objective appraisal of the possibilities, the fact cannot be disregarded that a major part of Canada's present petrochemical expansion is underway in Central Canada where large refining centres

supply raw materials at a somewhat greater cost than in the Prairies, but much closer to the ultimate market.

Resource Development and Full Employment

Besides certain obvious influences which it has had on the present shape of the Prairie economy and certain others which it promises to an increasing degree in future, domestic crude oil development has a number of important implications for the Canadian economy as a whole. Some of these implications may be of a short run character, but others are likely to influence the size, stability, and shape of the economy for a good many years to come.

In the current scene, crude oil exploration and development, plus provision for transporting it and refining it, are having the same kinds of influence on the Canadian economy as is the whole range of projects which can be grouped under the title of resource development. The level of capital investment in a country is recognized by Keynesians and non-Keynesians alike as an important determinant of the level of economic activity. There is no disagreement then that Canada's unparallelled growth and prosperity in the postwar period has been very intimately related to its program of resource development and to the high level of investment which has accompanied it. In a period of defence buildup such as the present, this investment program, because it is considered to be essential, also makes itself felt as a claimant, along with direct defence and consumer needs, on productive resources which must be allocated to the most essential purposes.

By the end of this year, the Canadian oil industry will have invested $1 billion since the Leduc discovery in searching for and developing Western crude reserves and in providing outlets for them. Both in terms of this total and of its current quarter-of-a-billion-dollars annual rate of expenditure on exploration and development alone, the development of our Prairie crude resources ranks as by far the largest single project in Canada's program of resource development. In recent years when Canadians have been devoting close to one-quarter of their total productive effort to capital projects, Prairie oil development has accounted for roughly 10% of the investment in new productive facilities. Of the $1 billion total which will have been invested by the end of this year, just over $800 million will have been spent in geophysical and other exploration activities, in land acquisition, and in wildcat and development drilling. The balance has been invested in the provision of transportation facilities such as crude gathering systems, the Interprovincial Pipeline and lake tankers, and in new Prairie refinery capacity.

These huge expenditures have had obvious income effects on the Prairie economy. The Alberta Government alone has received royalties, rentals, and bonus payments totalling more than $100 million. The City of Edmonton has increased its population by 40% in five years. But

the effects of this huge investment have been felt far beyond the Prairies. A mill for rolling steel pipe, the construction of four 115,000 barrel lake tankers in Ontario shipyards, and a vast increase in rail shipments of oilfield and pipeline materials and supplies are only isolated examples. Oil development has not only played its part in stimulating a high level of economic activity in Canada, but is also rapidly contributing to a growth in national productivity.

Resource Development and the Strength of the Dollar

Like most of Canada's other resource development projects, the effort devoted to Prairie oil development has required both domestic and foreign resources. The pace of development has been far faster than Canadian resources could possibly have met. After drawing on our own resources to the maximum, we have needed to call on those outside our borders for material and equipment, human skills, and, not least of all, savings.

Specialized drilling and exploration equipment has had to come from the United States. Steel and pipe not made in Canada has had to be imported from the United States and the United Kingdom. To some degree Canada has also had to rely on the U.S. oil industry for experts on oil exploration and production. The number of skilled Canadians could not possibly match an effort which in 1951 was close to twenty times that of 1946. All of these factors have meant that the Prairie oil development has created U.S. dollar demands. These demands, however, do not appear to have meant a net drain on Canada's exchange position even in the first stages.

For one thing, increased local crude production has provided an offset from the beginning by savings in foreign exchange requirements. In 1951 this exchange saving, resulting from the substitution of Prairie crude for imported crude and products which would otherwise have been necessary, was equivalent to an estimated $155 million. While no reliable estimates of the United States dollar content of the physical investment program are available, there is good reason to believe that last year's exploration and development effort of $225 million would not have had a U.S. dollar content of this magnitude.

Besides producing foreign exchange savings which probably now substantially exceed the foreign exchange cost of the development program, Western crude has also influenced capital movements which have had a buoyant effect on the Canadian dollar. Perhaps more than any other single project, Prairie oil has attracted substantial investment funds to Canada from abroad. Without such investment funds for this and other projects, our economy would not have been able to support a program of resource development of the magnitude which has been maintained.

The effect of growing domestic production of crude oil on Canada's long term balance of payments position will be very great. For many years import requirements for crude oil and petroleum products have been one of the largest and most rapidly growing U.S. dollar items in Canada's foreign exchange balance. In 1951, despite Prairie production which had expanded to the point of accounting for nearly one-third of Canada's total requirement, the external bill for petroleum amounted to more than $350,000,000. Competent forecasters now believe that within a very few years Prairie crude production will have expanded to the point of making Canada self-sufficient in oil. This will not necessarily mean that Prairie oil supplies all Canadian requirements directly. It may mean that after supplying directly the requirements of all of Canada west of Montreal, enough Prairie oil will be exported to balance the requirements of the Montreal area and the Maritimes.

The complete or substantial elimination of the large annual U.S. dollar charge which the Canadian economy has hitherto borne on account of its petroleum needs will have a marked effect on Canada's normal balance of payments position. Other resource development projects, such as for instance iron ore, promise similar changes in the balance of payments position. In the case of oil, however, the balance of payments gain seems somewhat more assured than in the case of most other resources. This stems from the fact that the major part of the gain will not depend on sales in a foreign market on which we may or may not be able to count, but will be the assured result of the elimination of a substantial part of our existing need for U.S. dollars.

Prairie Oil and Canadian Economic Unity

Besides broadening the base and adding to the productivity and strength of the economy of both the Prairies and Canada as a whole, the Prairie crude development seems destined to bring to the Canadian economy more of that unity and balance which it has always found so difficult to achieve, a difficulty which has inevitably had its political repercussions. This integrating influence could have no better symbol in physical terms than, on the west, the 695-mile Trans-Mountain pipeline which will shortly link the oil fields of the Edmonton area in a very concrete way to Vancouver refineries and British Columbia consumers of petroleum products and on the east, the 2,000-mile supply chain whose links are the 1,126-mile Interprovincial pipeline, a fleet of 115,000-barrel lake tankers, and a products pipeline from Sarnia east, the three combining to bring Alberta oil to Ontario refineries and Ontario consumers.

This particular physical result of the discovery of Prairie crude is far from being the final measure of its balancing and integrating effects on the Canadian economy as a whole. As suggested above, the Prairie economy seems likely to achieve a greater degree of industrialization. In crude production itself it may well, within a very short time, have an

industry rivalling wheat in value of product produced. From these various prospects the Prairie economy should win strength and stability on which it could not count while it was dependent almost entirely on world markets for a single crop.

Industrialization and diversification will also inevitably link its fortunes more closely to the economic well-being of the other geographic areas of Canada, with advantage to all concerned. As an instance, the new petrochemical plants at Edmonton will find their markets for organic chemicals and cellulose acetate throughout Canada as a whole. Production of the cellulose acetate will in turn be linked directly to a pulp project recently established near Prince George in British Columbia. Petroleum coke from Edmonton refineries is currently moving to Arvida to provide the electrodes essential for aluminum refining. The huge Kitimat aluminum project now under way in British Columbia may eventually make still larger demands on Prairie refineries for this vanadium-free coke which can be produced from Prairie crude.

As the Prairies come to find more and more of their customers in Central Canada or on the West Coast and as supply lines for essential raw materials bring growing integration within the total Canadian economy to what have heretofore been largely separate economies geographically, Canada as a nation should increasingly gain that unity and strength which natural barriers have contrived to make her most difficult goal.

Canadian Oil in the Strategy of the West

In the present struggle between the free world and the Iron Curtain countries, Prairie crude development has special implications. Recognition of these implications has already affected the development of this new resource and in all probability will affect it again in the future. To view this subject in perspective it is advisable to consider some fundamental facts of petroleum demand and supply in the Western Hemisphere.

The United States is the world's largest consumer of petroleum products, accounting for about 60% of total world demand. Canada with its population of only 14 million is the world's second largest consumer of petroleum products in gross terms and, by a wide margin, in per capita terms. In both countries the high level of petroleum consumption is not only a reflection of high standards of living but is an essential element at present in their high productivity. Because this productivity is the source of the high standard of living enjoyed on this continent and because, equally important in these difficult times, it is the guarantee of strength in any world struggle, it is vital that this productivity be protected. Adequate and assured petroleum supplies are more important to the effective functioning of the economies of the United States and Canada than to that of any other country in the world.

The need to ensure that the sources of petroleum for this continent are both adequate and assured is apparent. What is the actual supply situation? In the brief 92 years' history of the petroleum industry the United States has accounted for two-thirds of the world's entire cumulative production of crude oil. Today its 490,000 oil wells are producing 6,200,000 barrels out of a world total of 11,900,000 barrels daily. American production has been increasing yearly and, despite a very substantial growth in the output of both Venezuela and the countries of the Middle East, still accounts for more than 50% of the world's production. However, the United States' requirements have grown at an even faster pace than domestic production. In 1948, after many years as a substantial exporter of crude and products, the United States became a net importer of petroleum. When Canada's requirements of close to 450,000 barrels per day and her crude production of 160,000 barrels per day are included, the continental deficiency for 1952 seems likely to be of the order of eight to nine hundred thousand barrels per day.

If the Western Hemisphere is considered as a whole, the picture becomes somewhat more reassuring. While countries such as Peru and Mexico have passed out of the picture as reliable sources of export crude, Venezuela's substantial and expanding production provides sufficient surplus to balance North American needs. Moreover, with the recent sizeable growth in crude production in the Persian Gulf (even considering the present situation in Iran) and in refining capacity in Western Europe and the United Kingdom, the former dependence of Europe on the Caribbean area and the United States industry is rapidly disappearing.

But even with all crude resources in the Western Hemisphere becoming available for Western Hemisphere needs, the longer term picture may not be entirely satisfactory given today's world political climate. If, for instance, one looks at proved reserves in terms of requirements, one finds that the Western Hemisphere has just over one-third of the world's reserves but more than two-thirds of the world's requirements. At current rates of consumption, its reserves would amount to little more than a dozen years' supply. The Eastern Hemisphere, on the other hand, has two-thirds of the world's reserves, but its consumption is equivalent to only one-third of the world requirement. At 31,796,000,000 barrels in December 31, 1951, the United States' proved reserves of crude oil and condensate are equivalent to about 12 years' supply at the 1951 level of U.S. consumption.

These statistics are not as immediately ominous as they might suggest. At the end of 1935 the United States had only 11.4 years' supply at its 1935 rate of consumption. In the sixteen-year interval production has increased substantially, but year after year there has been a continuing addition to reserves which has kept pace with new and higher levels of demand. But with new reserves gradually becoming more and more

costly to find and with the new dependence of the continent on outside sources for a small margin of its requirements, the question of assured supplies cannot be entirely disregarded.

Whether considered in terms of economics or geopolitics, any substantial oil reserves discovered in either Canada or the United States are therefore seen to be a matter of intense interest. From the strategic point of view the fact that the new Canadian reserves can reach large refinery centres in both the United States and Canada by internal supply lines not vulnerable to enemy action adds to their importance.

To varying degrees, similar considerations of strategic value apply to most of the programs of resource development in which Canada is now engaged. The large demands which the United States economy has made both in peace and in war on essential raw materials such as iron ore, base metals, electric power, forest products, and petroleum have inevitably taken their toll of the country's natural wealth. The new supplies which are becoming available in Canada represent, therefore, a valuable asset both for the economy of the North American continent and for the strength of the North Atlantic Alliance.

That these resources are so recognized is clear from the priority which their development has been given by the Governments of both Canada and the United States. To cite only small examples from the domestic scene, one can point to deferred depreciation exemptions and to materials priorities. Pertinent, too, is the Canadian Government's reported arguments in the Councils of NATO that the high proportion of Canada's gross national product devoted to the development of vital resources is in many ways as important a contribution to the common cause as the 12% of her national income which is committed for direct defence during the current year. As evidence of the American Government's view, one can point in the case of oil to the steel allocations which are permitting the rapid expansion of exploration and development drilling in the Prairies and without which a Trans-Mountain pipeline could in these times be no more than a hope.

Accomplishment and Prospect

In a period of five years, crude oil production has become a major part of the Canadian economy. Proved reserves have reached 1.5 billion barrels, about 10 years' supply for the whole of Canada at current rates of consumption. These reserves would support production of 250,000 barrels daily, and outlets have already been provided which will in 1952 absorb 160,000 barrels daily, or more than one-third of Canada's current requirements. In 1952, Prairie crude will satisfy the full requirements of the Prairie market, the small requirements of a refinery at Superior, Wisconsin, and close to two-thirds of the requirements of Ontario refineries. In 1951, after only four years of growth, Canada's oil and gas production had a value of $128 million. This compared with $159 million

for gold, $151 million for nickel, $149 million for copper, and $110 million for coal, four products which have long had a substantial place in the Canadian economy, is certainly significant.

What of the future? In the past five years additions to Prairie crude reserves have averaged close to 300 million barrels per year. By every measure of exploration and development activity, the pace of the search for oil has expanded at a growing rate. By the end of 1951 land under lease and reservation was more than eight times that of 1946, the number of geophysical parties was more than fourteen times that of 1946, and the annual rate of exploration and development expenditures was twenty times that of 1946. In each of the last five years the number of oil and gas discoveries has been greater than in the preceding year. As against current reserves of 1.5 billion barrels, estimates of the ultimate reserves to be proved in Western Canada run from 5 billion to 20 billion barrels.

Such estimates are based on a variety of factors, all of which combine to suggest that the potentialities of the prospective crude producing areas of the West have as yet only been scratched. The areas geologically favourable to crude reserves in Western Canada total 770,000 square miles, three times the favourable areas of Texas, which has half of the proved reserves of the United States and is currently supporting a daily production of more than 3 million barrels of crude per day. With one-third of the geologically favourable area of Western Canada, Texas has almost thirteen times the proven oil producing area and almost ten times the reserves. Canada's proven producing area of only 294 square miles stands in the ratio of 1:2600 to its geologically favourable area.

All of these facts suggest that in the past five years only a very small start has been made towards testing Western Canada's prospective crude producing areas. Most of the exploration effort to date has been concentrated in central and southern Alberta, with the major discoveries occurring in central Alberta fairly close to Edmonton. As the pace of exploration intensifies, more and more effort is being directed towards the northern parts of the province, extending now into the Northwest Territories and into parts of British Columbia. Recent developments in the Williston Basin area south of the border and in Saskatchewan and Manitoba have stimulated an intensified effort in these provinces, particularly in Saskatchewan. The growing scale of the search effort is reflected in the rise of projected exploration and development expenditures for 1952 to $250 million from last year's record level of $225 million. Taking all factors into consideration, it seems reasonable to estimate that by 1954 the addition of new reserves will be such as to provide potential production of more than 400,000 barrels per day as against today's potential of 250,000 barrels.

Equally as important as the size of the prospective reserves and the rate at which they may be established are the size and direction of market

outlets for Prairie crude and the rate at which they may be established. As indicated earlier, the prospective outlet for Prairie crude in 1952 is of the order of 160,000 barrels per day, with local Prairie demand accounting for approximately 90,000 barrels of this daily total and the balance moving out through Interprovincial pipeline. Over the next two or three years expansion of the transportation and storage facilities should bring Interprovincial pipeline to its peak capacity, thus providing an outlet for a total of about 110,000 barrels per day of Prairie crude, with some 15,000 barrels per day being absorbed by Superior, Wisconsin refineries and the balance satisfying the major needs of Ontario refineries. In early 1954, the Trans-Mountain pipeline is scheduled to begin operations, supplying the Vancouver area refineries with their estimated requirement of not quite 40,000 barrels daily. Beyond these amounts, which with estimated Prairie demand should total about 255,000 barrels per day by 1955, no other outlets for Prairie crude have yet been clearly established.

Three major potential markets suggest themselves. The United States Pacific Northwest is a rapidly growing area whose demand for petroleum products is expected to exceed 300,000 barrels per day by 1955. This area is currently supplied with refined products from California and has no local refining capacity. It is, of course, close to the projected terminus of Trans-Mountain pipeline but could not become a market for Prairie crude until refinery capacity is built. An investment of perhaps $100 million would be required, with corresponding amounts of steel, to build refining capacity to use 100,000 barrels daily.

Another possible outlet for Prairie crude would appear to be in the Minneapolis area where 1955 demand is estimated to be slightly higher than that in the Pacific Northwest. This area again is largely deficient in refining capacity and is currently dependent for petroleum products on Chicago, St. Louis and Oklahoma refineries. For Prairie crude to reach it in quantity a large investment would have to be made in new refining capacity and in new pipeline facilities from Edmonton, over 1,200 miles away.

The third major outlet which might be visualized is Montreal, which is estimated to have a 1955 demand level of 150,000 barrels daily. Montreal has the refining capacity — it is in fact Canada's largest refining centre — but it also has adequate supplies of water-borne crude from the Gulf of Mexico and Caribbean area, which lay down at somewhat lower values than those with which Prairie crude would have to compete in either of the other two major potential markets. Movement in this direction would require a very large investment, well over $100 million, in either a large pipeline all the way from Edmonton to Montreal or in a combination of pipeline, storage, and tankers.

Of these three major outlets potentially available for the Western crude, a strong case in terms of the most efficient use of continental

resources can be made for choosing the Pacific Northwest, or perhaps Minneapolis. In both cases, however, there are the twin obstacles of lack of refining capacity and the presence of a high U.S. tariff on crude imports. Under the current scale of U.S. duties the bulk of any Canadian exports of crude to the United States would have to absorb a tariff of 21 cents per barrel. From the standpoint of the Prairie crude producer and of Canada this tariff is the equivalent of 800 miles of tanker transportation cost. It limits the ability of Canadian crude to compete in United States markets correspondingly.

Present U.S. tariffs on foreign crude are fixed by a trade agreement with Venezuela which provides for a certain quota of imports at a duty rate of 10½ cents per barrel and the balance at 21 cents per barrel. Because quotas established for the lesser rate for any individual country are based upon past levels of importation from various areas, Canadian crude must enter the U.S. largely under the 21 cents duty. Negotiations are currently under way between the Governments of the United States and Venezuela with the objective of negotiating a new agreement providing lower tariffs. The outcome of these negotiations cannot be predicted with any certainty and, in any event, will probably not be known for some time. The negotiations do suggest, however, some prospect that Canadian crude, because of the "most favoured nation" principle which would apply to any revision of the existing treaty, may eventually face a lower tariff wall on entry to American markets.

Thus the eventual destination of the Prairie crude production which is the objective of present exploration efforts is a matter of some uncertainty. However, the ultimate capacity of Trans-Mountain pipeline is 200,000 barrels per day, and if sufficient refining capacity should be provided in the Pacific Northwest there seems every reason to expect that pipeline tariffs with throughputs of this magnitude would permit Alberta crude to absorb the U.S. duty and still compete in that area with California crudes.

Present activity in Western Canada suggests that over the next four years another billion dollars will be invested in the search for additional crude reserves. If experience to date and the geological indications are fair measures of the success likely to be achieved, this effort should bring further substantial additions to Canada's crude reserves. Given the present and prospective need of this continent for new supplies of crude oil, it is reasonable to conclude that the additional investment to provide an outlet for the reserves which are in prospect will be forthcoming. It seems reasonably certain that Prairie crude production will continue to grow — to the benefit of Canada as a whole. It is to be hoped that the outlets provided for it will also be those which will be of the greatest economic and strategic advantage to the whole continent.

Executive Health Maintenance

G. E. Hobbs

Dr. Hobbs discusses the comparative health status of business executives and points out the contributions which can be made by medicine and by the individual to improve it. His challenging observations should provoke serious thought and perhaps necessary action on the part of Quarterly readers.

DURING the present century industry has shown a growing concern for the physical welfare of its personnel. By the establishment of medical departments it has taken steps which provide preventive services to a large proportion of the working population. Without the support of executives, a trend of this type would not have been possible. The statement has often been made that this development is not only desirable from the humanitarian point of view, but is also "good business", because it more than pays for itself by preventing absenteeism caused by illness.

Despite the interest and support executives must have given this development which is directed toward the welfare of other employees they have, until recently, neglected their own group. They have overlooked the fact that they, too, are valuable to their company and that the procedures which have been of proven value to other employees are equally valuable when applied to the preservation of the health of the executives themselves. The extensive development of a program for health maintenance of executives had to await the emergency created by World War II before it grew beyond the isolated experimental stage.

This article will deal briefly with the problem of health maintenance in the executive group under the following headings: (1) the health picture as related to comparable groups in the general population, (2) what medicine can contribute to this problem, and (3) the responsibilities of the individual in determining his health status.

The General Picture of Health Status

To consider adequately the question of health maintenance in any group, we must clearly define the group in terms of its health problems as compared with those of the general population. From the medical point of view, executives consist simply of a highly selected group within

the general population. This selection is in terms of sex, age, income, intelligence, education, and occupation. In the first place they are predominantly males. From this we know that they will be ill less frequently, but that these illnesses will be of a more serious nature. Moreover, they are, for the most part, above thirty years of age. The outstanding health problems will be those characteristic of this age period, namely the degenerative diseases and the new growths. They are presumably above average intelligence and education, and, therefore, should have a knowledge concerning health principles which exceeds that of the average. Presumably, because of their occupation, they are exposed to continued, prolonged tension inherent in their place in industrial society. Thus they can be expected to suffer more frequently with conditions such as high blood pressure and duodenal ulcers, in which we think stress is important. To these one can add the common respiratory infections—a problem of mankind at all ages and in all walks of life.

Having identified our group, let us see how it compares from a health point of view with other employed groups with a similar age and sex distribution. This can be accomplished most accurately by a comparison of the death rates in selected age groups with parallel rates in the general population. Although mortality statistics are not available for executives alone, we do have information where this group is combined with proprietors of small businesses, professions, etc. Studies in this group, both in the United States and England, have shown them to be a highly preferred group insofar as their life expectancy is concerned. Most studies show a mortality of at least 20% below the average male working population, and almost 50% below the unskilled worker group. In fact, this group has consistently enjoyed the lowest mortality rate, with the exception of the agricultural worker, of any occupational class.

These facts do leave many questions unanswered, but they should serve to dispel the popular misconception that the life of a business executive is hazardous.

The Medical Plan for Health Maintenance

Health maintenance in any group involves two distinct approaches. The one is primarily a medical approach. It involves a detailed diagnostic study of the individual at specific intervals, usually one year, to detect the presence of early remedial diseases. The other is the responsibility of the individual and involves a consideration of certain general habits and characteristics which have been shown to be important in determining the well-being of the individual.

The plan established by industries for their executive group is essentially an extension and elaboration of the periodic examination which is used by all preventive services directed toward the individual. Periodically, usually yearly, the executives are given a thorough physical examination, to which are added a number of laboratory examinations of the

urine and blood and usually an electrocardiogram. Other specialized studies are not carried out routinely, but as indicated by the examination. In some industries this examination is compulsory and in others, voluntary. Some schemes report only to the executive; others, to both the industry and the individual. Most industries do not make use of their own medical organization, but send the executive to an independent physician or clinical group. Although the complexity of the examination varies markedly, it often involves a day or more in hospital and may cost the firm over $100. If carried out adequately, it should not only detect early disease, but also provide an opportunity for general suggestions concerning health maintenance.

Although this examination is directed toward many medical conditions of significance, those of cancer and degenerative diseases stand out because of their frequency in this age group and their seriousness as a threat to the life of the individual.

Although we do not know the cause of cancer, we do know that if it is identified at an early stage in its development it can, in most instances, be cured by radical surgery. The problem is that of early recognition. The early symptoms, except for the small group on the surface of the body, are not specific. The symptoms experienced by the patient are those which may be caused by many minor and unimportant conditions other than cancer. Although considerable effort and money have been expended attempting to educate the lay public on these symptoms, they are best evaluated by a physician. One of the most important contributions of the periodic examination is the consideration of any symptoms and the specification of further examination which is required for early diagnosis.

The disorders of degeneration may take many forms, but numerically the most important are changes involving the small arteries to muscles of the heart. Although we are again in ignorance of the basic cause, we know this is the end result of a process which has been going on silently for many years. It is an axiom in medicine that prevention is not possible without knowledge of causation. However, here again the periodic examination can be helpful, for, by the electrocardiogram, early diagnosis is possible, and it is thought by many that if the person's life is regulated it can be extended. The suggestion that this condition develops at an earlier age in those who have lived a life of extreme activity and tension is supported by a large body of lay and medical opinion, although this is difficult to prove or disprove on a scientific basis. One factor, however, appears to be clear. Those individuals who have an elevation of their blood pressure do develop heart disease at an earlier age and more frequently than those with normal blood pressure. This is also true of overweight persons, as we will discuss in more detail later. The handling of high blood pressure presents the most favourable aspect of

this condition, for it is present many years before there is any symptom and is readily identified by a simple procedure at the time of the yearly examination. At least in the early stages it can be treated with success in some patients.

In addition to the more serious conditions, the common cold deserves special mention. It is not a condition which can be helped significantly by the periodic examination, but is, rather, a problem which concerns more the function of the medical service within the plant. I discuss it because it is a common problem to all groups, and lay opinion and pressure may cause a medical department to embark on some pet scheme of prevention before this scheme has been properly established, because of some sensational medical article in the lay press.

The common cold is the most frequent cause of illness in any industrial group. Most workers have from one to three colds per year. The story of the various unsuccessful attempts which have been made to prevent the common cold is an interesting one. At the present time we simply do not know how to prevent this common malady. If a small fraction of the vast amount of money which has been wasted on useless remedies were to be spent on scientific research into the cause and prevention of the condition, the common cold would, undoubtedly, have long since been controlled.

Despite our failure in prevention we do know much about the condition. It is infectious, is spread from person to person by talking, coughing, and sneezing, and has relatively little to do with exposure to cold. The incidence is not decreased by the use of air conditioning, despite statements to the contrary, and is influenced relatively little by climate. The rugged, outdoor, cold-shower type of person does not escape any more frequently than does the indoor, hot-house individual. Vitamins and cold vaccines have had their vogue, but real scientific tests failed to show them to be of any value in prevention. Ultraviolet light has been sold on the basis that it will sterilize the air and thus prevent colds. It does sterilize the air of a room, but it does not decrease the frequency of colds in those who use the room.

The most recent attack on this problem has been the use of antihistamine drugs in the early stage of infection. These are compounds which have been successfully employed in the control of allergies such as hay fever. They were first used in treatment of the common cold on the reasoning that the early stages of a cold are not unlike hay fever in their manifestations. The original study showed that in approximately ninety per cent of those treated, the cold could be aborted or stopped if the antihistamines were given within a few hours of the onset of symptoms. This was followed by an advertising campaign of major scope in the newspapers, magazines, and radio and resulted in the consumption of an extremely large volume of these drugs. Since this original study,

many others have been carried out on a controlled, scientific basis, and have failed to show the slightest influence of this drug on the course of the illness.

The Responsibility of the Individual

Although the most important aspect of health maintenance is the periodic physical examination, the individual, to some degree, determines his health status by the manner in which he lives. Here our information is derived from the study of the mortality pattern in large groups according to certain readily measurable personal characteristics and habits. The findings of insurance companies have provided the most extensive information. We will consider only weight, consumption of tobacco and alcohol, and high tension living.

It has been said that everyone loves a fat man, but this statement should exclude the insurance companies. For many years it has been recognized that associated with each increase in pounds above the normal weight for any height and age there is an associated increase in mortality. In a study of the records of over 50,000 men and women insured from 1925 to 1934 and followed until 1950, it has been shown that for men from 20 to 64 years of age, which would include our executive group, those considered overweight have a mortality half as large again as a similar group of normal weight. As the excess of weight increases, so does the mortality. Those classified as markedly overweight have an excess mortality of seventy per cent above the average group. Death in this group is primarily caused by diseases which may be classified as degenerative in nature. Deaths from heart disease are half as many again as in the standard weight group. Diabetic deaths are just under four times the average, and deaths from gall stones twice that of the expected standard. However, all is not black for the fat man. Although it does little to influence the overall unfavourable mortality picture, death from ulcers and suicides are appreciably lower than in the standard group. Moreover, it has been shown that those who have been overweight, but who have been successful in reducing, show a decline in mortality rate in proportion to the fall in weight. I would agree entirely with the Metropolitan Life Insurance Company when they state in their Statistical Bulletin that "weight control seems to be the most practical means available at present of preventing or retarding the degenerative diseases of middle and later life that now outrank all other diseases as a cause of death."*

Any increase in weight is a common development after a student leaves university and settles down to a routine job. This increase is a gradual one. A few pounds a year do the damage, and it is much easier to prevent the increase than remove it once it has developed. This can

*"Overweight Shortens Life." Metropolitan Life Insurance Company *Statistical Bulletin* 32, October, 1951. pp. 1-4.

be theoretically controlled by limiting the intake of foods known to be high in caloric value. Presumably the really iron-willed members can keep an accurate record of their weight and are quite capable of preventing this development. However, this is another function which the periodic health examination serves. Here the weight becomes an objective measurement to some other person, and it can be plotted from year to year.

The influence of tobacco on the health of the user is a subject which has been debated hotly since the habit was first introduced. Whatever is written about it is highly coloured by the personal habits of the writer. However, mass studies on the mortality of heavy- and non-users of tobacco leave little doubt that its use is associated with a marked increase in mortality. When two groups of 100,000 people at the age of 30 were followed for the next 30 years, it was found that approximately 66,000 of the non-smokers and 46,000 of the heavy-smokers were alive at sixty years of age. The relative mortality of the heavy-smokers was some fifty per cent higher than that of the non-smokers.

The story of alcohol mortality is similar to that of tobacco. In addition, it is important indirectly in relation to health. Even when taken in small amounts it tends to increase the appetite, and this in turn leads to overweight and increased mortality. Moreover, it can be used to relieve fatigue and to postpone needed rest.

It is a commonly accepted statement that the executive is a person who is subjected to excessive stress. He is faced with the extreme competition of present industrial society, and works hard and long under these conditions. Actually, whether this is true or not is hard to prove or disprove. Is their life more tense than that of a busy medical practitioner? I do not know, but I doubt it very much. Moreover, one does not have to read a great deal of medical writings of the past to realize that every generation has this idea about its own times. The past to any generation appears as a time when life was quiet, serene, and carefree, and the present, full of anxieties, uncertainties, and tension. A great deal of this thinking undoubtedly originates in the attitude of the "young man in a hurry" who looks at the older generation, which has reached some sort of compromise between its interest in living and its drives for success.

However, we do know that prolonged tension will cause illness of various types and probably certain conditions which may shorten life. Probably the picture is clearest in the relationship of prolonged emotional tension to nervousness or psychoneurosis. These are conditions which have been related to situations productive of prolonged emotional tension. They are very frequently called by names which relate them to the circumstances under which they develop. The best known are the war neuroses or battle exhaustion. However, similar conditions are com-

mon in civilian life, and differ only in degree of symptoms and the circumstances under which they develop. These have been described as a common finding in executive groups. Here fatigue and lack of interest in the job appear to be the outstanding symptoms. The picture is identical with that found in other neuroses. Whether tension will produce organic diseases is open for question. However, there is good evidence to support its relationship to such conditions as duodenal ulcer and, to a less extent, high blood pressure. The former is important as a cause of illness, but relatively unimportant as a cause of death. High blood pressure, on the other hand, is closely related to the heart attacks mentioned previously.

How can one live a useful life and still prevent the development of this type of tension? It is very easy to give advice, but it is extremely difficult to take this advice and orientate one's life in terms of the conditions under which one must live. Moreover, the one who is most likely to need the advice is the one least likely to take it seriously. The cause of most tensional states usually stems from within one's own thinking, and is not primarily related to the conditions under which he lives or works. Many are based on fundamental conflicts which have their roots in childhood experiences. Many are related to the basic drives for success, domination, and security. If we are to avoid the physical results of prolonged tension, we must learn to modify them. The cause is more internal than external in origin.

Thus individual action, along with appropriate medical care, should do much to maintain, and perhaps improve, the present health status of leaders of the business community.

Postwar Trends in Consumer Durables

G. K. Goundrey

This article is concerned with some of the major developments in the economic situation in Canada in recent years, relating them to the present position of the consumers' durable goods industry, the textile industry, and the automobile industry. The author points to some of the reasons for diminished sales and for the development of excessive inventories and discusses briefly the possible future trend of the markets for the products of these industries. His analysis happily bears out the suggestion made by Messrs. Gillies and Curtis in our Autumn issue to the effect that there is room for useful agreement and cooperation between the academic economist and the businessman.

RECENT estimates by the Dominion Bureau of Statistics point out in a rather startling fashion what has been quite apparent to the businessman about the markets in the general field of consumption in Canada. In looking at the figures for sales of department stores, one is immediately impressed (albeit unfavourably) by the statistics relating to consumers' durable goods and textiles. The changes in sales 1950 to 1951 are listed for two months below.*

Department	*Sales in $000's* 1950		1951		*% Change (1950 to 1951)*	
	Oct.	*Nov.*	*Oct.*	*Nov.*	*Oct.*	*Nov.*
Home Furnishings	5,310	5,560	4,700	5,240	-11.5	- 5.8
Furniture	5,050	4,520	4,110	4,370	-18.6	- 5.4
Major Appliances	3,120	2,850	2,120	2,390	-32.1	-16.1
Hardware & Housewares	4,360	4,590	4,090	4,520	- 6.2	- 1.5
Women's and Misses' Coats and Suits	3,600	2,900	3,450	2,620	- 4.2	- 9.7
Men's Clothing	3,250	3,820	2,970	3,730	- 8.6	- 2.4

*Two sets of figures (*estimates*) are shown because it was felt that the various commodities would differ in the rate and time of decline.
Sources: Dominion Bureau of Statistics, *Department Store Sales and Stocks*. October figures from Vol. XVI - 10 (26); November figures from Vol. XVI - 11 (28).
It is important to note that sales are expressed in values, not quantities. Quantities declined even more because of the increases in prices. Price indices changed (Autumn 1950 to Autumn 1951) as follows (approximately): Combined Index - 171.1 to 191.1; Clothing Index - 184.9 to 215.5; Home Furnishings - 176.4 to 200.6.

The automobile industry showed a similar pattern, as both the quantity and the value of sales declined sharply. The figures for factory shipments of vehicles made in Canada (in units) are as follows:*

Month	*1950*	*1951*	*% Change (1950 to 1951)*
June	41,383	36,229	- 12.5
July	40,131	30,294	- 24.5
August	24,272	21,833	- 10.0
September	38,035	29,861	- 21.5
October	35,573	32,362	- 8.7

On the other hand, the number of new vehicles sold in October, 1951 was 22,708—down 36.6% from the number sold in October, 1950. The value of sales (retail) in October, 1951 was down 22.6% from the value of sales in October, 1950.**

The figures for sales in the textile industry are given above, and also fell sharply during the year.

Similarity of Products

There are a number of similarities between the products mentioned above. All are durable; each can have its purchase postponed for a short period if necessary; and all were in short supply during the war and in the period immediately after the cessation of hostilities. One further point is that in all three of these fields Canadian producers face a great deal of international competition, particularly from the United States and the United Kingdom.

The Postwar Sellers' Market

In 1945, at the war's end, it was apparent to anyone who examined the situation that a sellers' market would develop for the products of many of the industries that had been diverting output to war production.*** The dearth of consumers' durable goods—particularly radios, refrigerators, stoves and other electrical appliances, plumbing and heating supplies, hardware and housewares, clothing, and automobiles—had resulted in a stored-up or delayed demand (only partially held in check by rationing and price controls) and pressures on the price level and output facilities. To counterbalance this strong inflationary trend, and to enforce some other rationing system (other than the price system)

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*Adapted from Dominion Bureau of Statistics, *Motor Vehicle Shipments,* October, 1951, Vol. 26, No. 10, p.2, and *Motor Vehicle Sales and Motor Vehicle Financing,* October, 1951, Vol. 23, No. 10 (27), p.4.

**The discussion here will be related primarily to the consumers' market. In this connection it is important to note that sales of commercial vehicles were generally steady. (The quantity sold fell 4% for the same two months, whereas the value of sales *rose* 12.7%.) Passenger cars (more relative here) were in a very much worse position; the quantity sold fell 48.6%, and the value of sales fell 35.8%. The recent release shows November 1951 sales down 33% from November 1950 (*Hamilton Spectator,* Jan. 12, 1952, p. 32).

***True, some people looked for a sharp recession immediately after the war. However, with the easy money policies of the Government and the international aid schemes (Marshall Plan), this was a short-lived belief.

the Government adopted a piece-meal withdrawal of controls. Expansion and price-wage spirals, waiting lists for many commodities, and general boom conditions in Canada followed in the years from 1946 to 1949.

The development of a sellers' market was aided (and partially caused) by three factors: (a) the use of bonds to finance the war, (b) the increased population in Canada, and (c) the investment and employment boom that was taking place.

During the war bond campaigns, the Government had emphasized the practice of buying bonds during the war and using these bonds for purchasing goods after the war—goods which were in short supply or unavailable during the period of hostilities. When these bonds were cashed (sold to the Central Bank through the chartered banks), the amount of purchasing power in the hands of the public was increased, and demand thereby strengthened. The Government policy of keeping the interest rate low (buying bonds at a fixed price above their market price) stimulated the liquidation of bond holdings by individuals and increased the liquidity of bonds to that of ordinary bank accounts.

The increase in the Canadian population had the effect of stimulating demand not only because of the increase in the number of people and because of the funds brought by immigrants into the country but also because of the practice of credit and installment buying which made it possible for people without the necessary purchasing power to buy products by mortgaging their future incomes. (This applied to natives as well as immigrants.)

The employment and investment boom in Canada was stimulated by new discoveries of raw material sources and the adverse exchange rate (particularly the belief that this was only a temporary phenomenon) which gave a bonus to American capital coming into Canada. (It may further be assumed that the adverse exchange rate acted to insulate the Canadian market from American imports.) The effect of the increased demand for labour and the extended labour force (veterans and immigrants) stimulated the demand for consumption goods and for construction materials. Employment in Canadian export industries was aided by the adverse exchange rate (since this made Canadian goods cheaper in terms of foreign currencies) and also by the tendency, particularly in the early stages of the transition from war to peace, for the American price level to advance more rapidly than that of Canada.

Many Canadian firms and industries expanded,* some to take advantage of the inflated demand, some forced to do so by competition

*Firms expanded by increased use of labour, by applying new machines and techniques, and by constructing larger plants and subsidiaries. Industries expanded because of these factors, but also because of the entry of new firms into the field. (These may be old established firms in other industries who are now interested in producing a product which they did not produce before.)

from foreign firms and new as well as expanded firms in Canada. This was particularly noticeable in the automobile industry, but it was common to most of the textile and other consumers' durable goods industries. The word, "forced", is used advisedly, since the object of this analysis is to show that any one firm was unable to protect itself in the face of these competitive actions.

The Pattern of Expansion

The general analysis will be illustrated with reference to the automobile industry, even though some of the factors described operate to a greater extent in the textile industry and in the consumers' durable goods industry.

It was evident immediately after the war that many firms were not taking steps to meet the full effects of the delayed demand. It may well be assumed that prices were not advanced as rapidly as they could have been and that output was not expanded as much or as rapidly as it could have been. This illustrated the fact that firms were not interested in the short-term profits which could have been made as much as they were in the long-term considerations of capacity and good will. There was no great rush to change either output or price policies. Instead of increasing prices to spread the available supply over the market, they instigated a system of dealer rationing, in which the customers were supplied according to some system of priority. Thus lists were kept of the people who wished to purchase an automobile or a refrigerator, and as the supply became available, these customers were satisfied in order of established priority. This can be interpreted to mean that firms hoped to protect themselves from over-expansion in the long run by restricting output in the short run to a level that would take care of just a little more than the amount that was expected to be normally demanded.

However, it must be admitted that there were large profits to be made in the short run if a firm was prepared to sacrifice the long run to the short run. Some firms were apparently prepared to do this. Because of this it was impossible for firms which had not held dominant or important positions in an industry in the prewar period to suddenly blossom out as full scale competitors; but to do this they had to expand. A second type of competition came from new firms entering the industry. An example of this trend in the automobile industry is the entry of Kaiser. The extension of operations by some firms into fields they had neglected also contributed to the increase in supply.

Another threat to producers was competition from abroad. Again, in the automobile industry, the imports from the United Kingdom and the United States (and even France and Czechoslovakia) threatened to destroy the future market of the more conservative firms (those which

planned for the future) and at the *same time* were taking away from the old domestic firms the delayed demand that had been built up by the wartime shortages. *It appeared that if the old firms were going to protect their old position in the market and if they were going to share in the satisfaction of the delayed demand from the war, they must expand and satisfy the market, even at its inflated level.*

The same was true of the electrical appliance, furniture, and textile industries, but additional factors led to even greater pressures. New residential construction stimulated the demands for furniture and appliances, and the textile industry was working at full scale to re-outfit veterans as well as those who for patriotic reasons had delayed purchases in the interests of the war effort.

Expansion was general, necessitated by outside competition and by the increased activity inside the country. Expansion, however, has important consequences on costs as well as on employment and revenue. These will be discussed below.

Effect on Prices, Costs, and Profits

The normal price, which is determined by the interaction of normal supply and normal demand, was abandoned in the postwar period. Because of the postponement of purchases, the inflation, and the increase in population, the amount of goods absorbed by the market at each given price rose, thus forcing prices up as supply stayed constant. Because firms were interested in the long run as well as the short run, however, they did not expand enough to satisfy demand to the point that prices would return to "normal". Instead they increased capacity slightly, hoping to satisfy excess demand gradually. The slight increase in supply led to an intermediate price, at which more goods were demanded than were available. Instead of allowing prices to soar, sellers instituted a priority system. This meant that there were many potential customers, unable to buy the product for the time being, many of whom were willing and able to pay higher prices to obtain it. In the case of automobiles, they did pay more. Used car dealers were selling cars with low mileage at prices that exceeded the list (new) prices.

However, consumer rationing was doomed to failure because of competition between firms in the industry, because of the entry of new firms, and because of competition from outside sources. This effectively meant that producers were unable to hold an intermediate price and plan production in order to prevent excess capacity from developing, since this future market as well as the present one was being destroyed or taken over by competitors. The future market was being injured by the credit and installment sales that were taking place, and the competition from the United Kingdom, especially in the case of cars, was becoming too great to go unanswered. This is the major reason why

the firms were forced to expand, even against their own long run interests.*

Let us next examine the effects of expansion on costs. Average cost for plants of varying sizes diminishes to the point of optimum utilization of plant and then increases. In larger plants this figure is higher for low output (because of the burden of overhead costs and other fixed charges) and lower for larger outputs where extra capacity is required. If output is to be expanded, efficiency demands the enlargement of plant.

Perhaps it would be well to emphasize just what expansion in an economy means. In the first place, all firms and industries do not expand at the same time or at the same rate. Some demands were delayed more than others during the war and therefore were more intense in the postwar period. They therefore required either a larger expansion in output or a greater increase in price to keep the demand for them in check. Secondly, expansion in the consumers' durable goods industries usually involves and requires expansion in the primary industries (mining, iron and steel production, and power sources). The iron and steel industry was forced to implement its own rationing system which allowed some firms to expand before others and actually held up expansion in some industries. The investment boom that went with over-all industrial expansion caused labour shortages (particularly in some skilled trades) and forced up wage rates. At the same time, in Canada at least, unionization and union activity were increasing and demands for increased wages were being met in the interests of increased output. Some industries here too are the leaders and help to set the pace for wages, since the policies of leading industries form a pattern or standard for unions in other industries to follow.

Firms use the products of other firms, and payments for these products constitute an element in costs. In other words, average costs may well be raised as a result of union activity and new price policies in firms which supply raw materials and other supplies to producers. As unionization increases, the tendency for "follow-the-leader" types of wage demands becomes more pronounced, and union shops set the pattern for non-union shops to follow. This means that those firms which lead in the expansion programs and have low costs since they are also setting the pace in wage payments (and other benefits) show inflated profits because the costs in supplying firms (and hence raw material costs) have not yet increased as a result of new wage increases. The inflated profit position of the leading firm or firms, results in new wage demands on the part of their workers and eventually causes further

*This concept of a normal or planning demand curve and a small increase in supply over and above the normal to work off the delayed demand appears on rational grounds to be a very good one. However, inflation and population changes and the buoyancy of expectations shifted this curve as well.

increases in costs. The leading firms are then faced with increasing costs in their attempts to satisfy the market at a time when the market can be expected to be easing because of the satiation of the demand delayed from the war period.

Effect on Labour

The tendency for full employment of labour (one might even say over-employment) can be expected to lead to decreased productivity per man-hour. This tendency can be explained on at least three grounds: (1) as employment increases and the shortage becomes acute, less and less efficient workers must be hired to supply the man power for the expansion; (2) the disappearance of the fear of unemployment as a spur to high productivity and greater effort lowers efficiency; and (3) the bottlenecks in production which result from the shortages of essential technicians (and the filling of these positions by workers without the prerequisite qualifications) hinder progress.*

This tendency towards diminishing productivity is, in the first instance, aggravated by unionization. During the war years when labour was exceedingly scarce, many workers who were almost unemployables were taken into the plants (and were happy to work both for patriotic motives and because this constituted a very high level of income compared to that to which they were accustomed) and some attained considerable levels of seniority. Although one cannot doubt the very fine job these people did during the war, it must be admitted that only in very special jobs are they as productive as a good worker. They therefore constitute some of the "dead-wood" in the labour force. There are also a large number of people without the necessary initiative or ability to hold down full time positions who were taken on during the war years and built up quite a few years of seniority. Newly formed unions emphasize union security and seniority in their first stages of development and therefore force management to continue to hire this "dead-wood". In the long run, however, the union may be expected to be the best organization to squeeze such individuals out of the labour force since it soon becomes apparent to a worker that his wages depend on his productivity, or more correctly on the average productivity in the plant, and that the presence of such "dead-wood" reduces the good workers' pay because of low production. It would seem that this is one field in which the union membership will aid management *gratis*.

Of course all of this presupposes that the labour movement does not put political action ahead of wage policies and working conditions. If a proper labour party is formed from the rank and file of the labour movement, then the size of the labour force becomes very important, and this may not be a legitimate conclusion.

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*Reasons (1) and (3) may be expected to disappear as time passes. Reason (2), however, is very important and poses a real problem for "full-employment" planners.

American Price Policy

A second contributing factor to the present situation (low sales and high inventories) is the price ceiling policy which has been established in the United States. This has double significance with the tendency of the Canadian dollar to approach parity with the American dollar. The price ceilings have meant that some of the elements of cost in producing consumers' durable goods are being held in check, and the return to parity has made American commodities appear more attractive to Canadian purchasers. When it is also remembered that there is a general overproduction in the same general fields in the United States, the increased movement of American goods into Canada is to be expected. (There is some evidence that the number of refrigerators moving into Canada, for example, has increased considerably in the past few months.) These factors have had the effect of further cutting into the home market of Canadian producers. (It is also possible that the movement to parity of the Canadian dollar may have an adverse effect on the movement of capital into Canada from the United States and so impede the development of resources and slow down the investment boom that has been going on for the past six years.)*

The Canadian Defence Program

The defence program in Canada has not had so far the effects that were anticipated. It has been slow to materialize and has to date been concentrated in those industries which were not feeling the pinch of disappearing demands. It, coupled with the war scare, *did* make it necessary for Canadian firms to stockpile essential materials that were expected to be in short supply because of the competition of government buying—a short supply which has developed only in a few lines. Firms attempting to plan for future production were in some cases left with large stocks of goods in process and of raw materials on hand, and this situation made increased or at least continued production at a high level seem more necessary. The defence program also forced many firms (for example, electrical goods producers) to expand in order to be in a position to supply what were considered certain Government requirements. If the expansion did not take place before the need became acute, the shortages of steel and other essential construction materials might make such expansion well nigh impossible. The extent to which this expansion has been carried out has meant increased fixed costs, which have further contributed to the present difficulties.

Government Credit Restrictions

The credit restrictions have had two noticeable effects. First, down payment and installment buying regulations have cut sharply into the

*Some *may* feel that the increased strength of the Canadian dollar is due to flight of American capital. They may therefore reach a different conclusion.

amount of sales of high unit price commodities at the retail level. Second, the restrictions on the amount of loans that the chartered banks could grant made it necessary for many of the retailers to attempt to dispose of their inventories, even at reduced or losing prices. Since many consumers' durable goods are what the marketers term "shopping goods", it is essential that retailers carry large inventories if they are to fulfill their essential function of supplying choices.

Changes in the amount of a loan which could be granted on stocks and bonds have also forced many people to liquidate their holdings of these instruments at a time when the interest rate had been allowed to rise, and thus the capital of the bond holder has been depleted.

The expansion in industrial capacity which was carried out in order to meet competition and enlarged demand and in anticipation of the defence effort, the wage spirals engendered by the shortage of labour, and the bottlenecks which have developed in many lines because of the shortage of trained technicians have all contributed to the difficulties now facing firms in the consumers' durable goods industries.

Delayed Demand

With respect to these commodities, there are a few general and long term remarks which should be considered as having been instrumental in the development of the present situation. Because these commodities are durable, they can be made to last a little longer if price and income expectations are detriments to purchasing at the present time. For this reason they can have a definitely postponed or delayed demand when supplies are very short. It is expected then that the general statements made above are most applicable when applied to the market for such commodities. The large per unit price also makes this type of commodity very subject to installment purchasing.

The Pressure of Overhead

Two points should be mentioned with respect to the manufacture of consumers' durable goods and cars. They are normally produced by firms with large amounts of capital in proportion to labour employed; and second, where labour is in widespread use, it is of a highly skilled type, the type which is so much in short supply and so much demanded by firms which are still expanding. This has contributed to very high wage rates for this class of labour and stimulated the substitution of labour-saving production techniques which contribute to fixed costs. When fixed costs and overhead in general become high, there is pressure to keep production at a high level in order to minimize the element of fixed costs in unit costs. This has meant that any movement to reduce output is resisted.

Two additional factors have been operating to increase the problem facing the consumers' durable goods industries. These are associated

with changes in the elasticity of demand which come about with general increases in the scale of income.

Elasticity of Demand

The first of these tendencies is the diminution of the responsiveness of sales to increases in the income of the consumer; the second is the diminution or disappearance of sales response to price decreases. These tendencies have been noted by economists and students of budgets since the 1930's.* Put in another way, these mean that the increase in sales as a result of the increases in income has been declining (the first) and that even if the prices were lowered, the increase in the amount demanded or sold would be very small (the second).

International Competition

Each of the fields discussed here suffers from very strong outside competition from the United States and the United Kingdom. The United Kingdom by devaluation and by conscious Government policy has been attempting to increase the scale of its exports, while the same industries in the United States are feeling the same pressures on their sales and have been attempting to sell more in Canada in order that they will not be forced to reduce output in that country.

The Fear of Price Wars

In the light of this analysis it is interesting to note that the fear felt by producers that the outlawing of resale price maintenance will lead to price wars is a real one. If the price reductions are not going to lead to greatly increased (*additional customers*) sales, the advantage of price reductions will be narrowed down to those sales that can be attracted from other dealers. If it is essential to reduce inventories (and the credit restrictions made it so), then these can only be reduced by either attracting a larger number of buyers (ruled out by the lack of response) or stealing customers from other dealers — definitely a price war.**

Nothing additional need be said to point out that responsible dealers would be the losers from such a policy since the additional costs of supplying services and proper treatment of customers would make it impossible for them to reduce prices by as much as their less responsible rivals.***

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*Some of the people who have hinted at this are: J. M. Clark in *Strategic Factors in Business Cycles;* Harrod in *The Trade Cycle;* Pitkin in *The Consumer;* Veblen in *The Theory of The Leisure Class;* Zimmerman in *Consumption and Standards of Living.*

**Some sales can of course be made at the expense of foreign producers.

***This is not an argument in favour of resale price maintenance as much as a statement that the timing of the Government step was the worst possible. The "price war" in Hamilton in the fall of 1951 showed the lack of response to price cuts. The response in New York in early 1951 may be ruled out as an example because size of market has much to do with success in clearing inventories in this way.

The Need for Improved Sales Techniques

One further point requires considerable thought. The period from 1940 to 1950 has been characterized by a sellers' market. That is, some ten years have elapsed since good selling techniques and advertising policies were essential to sales. This means that new and/or recent additions to sales forces have had little or no experience in "selling" and have been merely order takers. The older (in service) salesmen have frequently been put in responsible positions with little selling being required of them. This means that anyone who has begun a selling career since 1939 has never had to face the challenge of really *selling* a product.

The same general principles are true of advertising policies. In a sellers' market poor advertising techniques can still lead to expanded sales, and much of the competitive advertising today does not appear to the casual observer to be either commercially or socially desirable.

One may conclude then that a re-examination of advertising and sales policies and techniques would be highly desirable. The extent to which experience in selling in a tight market is necessary to the training of salesmen will decide how long it will be before sales can be expected to increase from revamped selling techniques and training courses. The results of any change for the better in advertising will take longer to work out, but firms would do well to reconsider the whole plan and not to accept too readily all the claims put forward by some advertising agencies.

The Future

This section is not in any way to be construed as crystal ball gazing. Too many factors can change suddenly and affect the markets for these commodities. Changes in credit and installment regulations, any change in the war situation in Korea, the beginning of the St. Lawrence Seaway or any changes in the defence program could seriously change conditions. These all add to the uncertainties facing the producer. The few general remarks under this heading may, however, clarify some of the present problems which are in existence.

The present tendency for imports to increase and exports to decrease (or not increase as quickly) can be expected to weaken the position of the Canadian dollar *vis* à *vis* the American dollar and (perhaps) bring back some of the conditions which disappeared when parity was approached.

American price ceilings have been very hard to hold, and it may be expected that they will be even more difficult to hold in the future. (This is particularly true of wages, essential materials, and products from the primary industries.)

New sales training courses can be expected to increase the quantity of sales. Advertising policies may require much more important and

far-reaching revisions and may be more difficult to correct if they are in error. This is a problem which requires much further study.

The productivity of labour may increase as (a) the labour market begins to feel the effects of some unemployment, (b) the age and sex distribution recuperates from the effects of the war, (c) the buoyant expectations about the future past income begin to settle, and (d) the unions weed out the extremists and "dead wood". This will in general improve the cost conditions. The increase in technicians to fill vacancies in specific fields will tend to reduce the pressure on wages. As the Government increases social service benefits and labour legislation solidifies the position of unions, demands for fringe payments and pensions may also weaken. The investment boom can also be expected to level out and weaken the demand for wages.

The inflationary spirals can be expected to decline with the present budget surplus and the credit controls *if* new inflationary tendencies do not appear as a consequence of the defence effort.

The defence effort, when it properly materializes, may be expected to reduce the excess capacity in some fields as Government contracts are let and production for the North Atlantic Treaty nations increases. Similar effects can be expected from the Colombo plan and other attempts to aid underdeveloped countries which increase the purchasing power of foreign customers for Canadian products.

It is to be emphasized that the present excess capacity (at a price necessary to cover the inflated cost) was largely a result of actions which firms were forced to undertake as a result of competition and other forces beyond their control. For this reason it is dangerous to blame the Government credit restrictions for the present position of the consumers' durable goods industry. Had the timing of such an action been more fortuitous (two or three years earlier) it would have been helpful to those firms who were attempting to work off the effects of the war without over-expanding. Because of the particular time at which these controls were imposed, they aggravated a situation that had already developed.*

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*Since the above was written, the Government has eased credit restrictions to some extent. These changes may seem to be an answer to some of the problems discussed, but reflection will show that they are a far cry from a complete solution. Sales may be expected to increase because many people will be prepared to mortgage future income in the interests of present purchasing, but the tendencies for the price level to stabilize will reduce this increase to quite a large extent. Of course, the generalization by the Government (if such were made) that prices had levelled off may be premature when it is remembered that defence expenditures have not yet reached their peak and that a large number of wage increases are being considered at the present time. There can be no doubt, however, that the easing of restrictions will make it much less painful for firms to make some of the corrections noted above. The danger of accepting the argument that the present position has resulted primarily from the credit restrictions needs considerable emphasis if the economy is to be kept free of deflation and unemployment when the present international tensions disappear.

It should be emphasized, however, that there is every indication that a period of readjustment is necessary if the economy is to save itself from the danger of another depression. It has been continually emphasized by economists that any slackening of the defence effort on the part of nations of the western world will have serious consequences on the levels of income and employment. New investment activities of major scope (for example, the St. Lawrence Seaway) would be required in the absence of a defence effort to keep the economy at a high level of activity. It is for this reason that firms must reconsider their efficiency at every step to protect themselves against possible future contingencies.

Outdoor Advertising

Mace Mair

Advertisers, members of the poster industry, advertising middlemen, and every "passer-by" will find this vivid treatment of the physical features, advertising values, and control of poster advertising well worth their attention.

IN the amazing development of advertising from a circus technique to a vital branch of merchandising science, advertising terms and terminology have been tossed higher and higher into a rarified atmosphere of "trade talk", or perhaps just plain double talk, until the man on the street has found it increasingly hard to understand what was being said.

One of the terms most likely to be misunderstood is the simple one of "outdoor advertising". Perhaps this is because, as the term implies, it is as all-inclusive as "all outdoors". Actually, outdoor advertising can be said to range from a small decalcomania sign on a service station window to Broadway's largest spectacular. Yet to the advertising manager, who integrates one or perhaps all the varied forms of outdoor advertising into a method of product distribution, there is a definite pattern for all the cogs of posters, painted bulletins, spectaculars, neon signs, outdoor point-of-sale aids, etc.

History of Outdoor Advertising

The origin of outdoor advertising is deeply rooted in the past. Many advertising media, with the exception of radio, TV, and those which are the result of modern inventive genius, claim to be the oldest. If "outdoor" is not the champion or "oldest medium", at least its earliest "operators" had the foresight to reproduce it on the most durable material. It is a matter of record that, as soon as language took a written form, messages were carved or written on walls or smooth slopes of rock and thus exposed to outdoor traffic of the day. Only later came stone tablets as forerunners of the newspaper and magazine. These earliest outdoor communications have been best shown in photographs of excavations at Pompeii.

The first attempts at outdoor advertising took the form of tradesmen's symbols such as the shaving mug and later the distinctive striped pole of the barber, the mortar and pestle of the druggist, and the anvil

of the blacksmith. Eventually these symbols were incorporated in notices or advertising messages painted or written on walls to catch the attention of the passer-by. The use of illustrations to identify a hostelry even to the most illiterate was part of the life of the people of Europe, and especially the British Isles, for centuries. Such illustrations were also, of course, the first overhanging signs.

During the eighteenth century small posters began to appear in England, and about 1800, bill-posting became a business, which was well described in the essay on "Bill Sticking" by Charles Dickens. In Canada and the United States at this time it was an unorganized business, largely devoted to advertising theatrical performances and circuses, which usually employed their own crews to post bills in advance of the arrival of the attractions.

Largely during the twentieth century operators of outdoor advertising services have supplemented poster advertising with many new methods of reaching the public with advertising messages. Omitting for the moment the more complex details of poster advertising, these are the main types of outdoor advertising.

Types of Outdoor Advertising

1. Painted Bulletins

These showmanlike structures have now almost superseded their predecessor, the painted wall, which in the early days was usually a barn wall. Remember the old Castoria signs? Outdoor advertising firms prefer to forget these seldom-painted messages, which as a rule were poorly located in relation to circulation of traffic.

The painted bulletin of today is an imposing structure 50 feet long by 18 feet high, usually providing a copy space 45′ 3″ by 10′ 4″. The copy space is made up of vertical metal strips, which are painted in a shop, taken to the location, and locked into place in the bulletin panel.

Like posters and, indeed, most forms of outdoor advertising, painted bulletins are quoted and sold under a yearly contract on a basis of cost per month. The price includes the painting of the original design and one repaint during the year. It does not include the cost of the original artwork or copies of the artwork if needed for supplying the same design in other cities. Painted bulletins are located only in areas, generally metropolitan, of heavy traffic concentration, and, because of their size and high circulation, are sold at a substantial increase over poster rates. (The advertiser is provided with an accurate count of the actual traffic which should see his message.)

Among special types is the rotary bulletin. This is shown on as many as six different locations during the yearly contract and enables the advertiser to spread the impact of his advertising over the most important areas of a city. Another modification is the use of "black

light". Here special paints and the alternation of incandescent light with fluorescent effects actually creates two different designs on the one bulletin at night. The use of these special and more fragile paints necessitates painting three times a year. Other adaptations are neonized bulletins, combining neon lighting effects, the use of cutouts of large figures, and three-dimensional bulletins.

2. **Spectaculars**

The term tells the story, and the place to see them at their greatest is, of course, New York's Times Square. A spectacular is a large steel structure displaying an advertising message lighted by electricity or neon or both. It is always erected in a location of supreme dominance in the heaviest metropolitan or sometimes highway traffic. Two outstanding Canadian locations which come to mind are the Imperial Oil sign at the Canadian end of the Peace Bridge at Fort Erie and Neilson's large display at the highway junction at the eastern entrance to Hamilton.

Most spectaculars are owned by the erecting company and rented to the advertiser. These contracts, which call for complete servicing by the erector, have been found to be most effective to the advertiser in his handling of questions of taxation, capitalization, and maintenance.

3. **Point of Sale Outdoor Signs**

These signs — as distinct from window, counter, and interior displays used at point-of-sale — are a vital and final link between the prospective buyer and the dealer or distributor for a nationally-advertised product. They vary widely from window stickers to small painted wall panels and are purchased direct by the advertiser. Their only relationship to outdoor advertising as generally understood is a similarity in copy theme and the fact that permits and legislation for highway signs are handled by the same branches of highway departments.

4. **Posters**

The poster is the most universally-known form of outdoor advertising, coming into its intensive use at the turn of the century under the now obsolete name, "billboard". The original posting structure was a wooden panel or "hoarding", to use a term still in frequent use in the United Kingdom. These panels carried posters of widths ranging from 3 to 24 sheets each. The poster of today is still occasionally referred to as a "24-sheet poster" but is usually produced in only 10 or 12 sheets.

The poster serves as an advertising medium in every country in the world where printing or illustration can be put on paper. Naturally, the circumstances of use vary greatly. Throughout Asia posters are a vital medium of communication because only a fraction of the people can read or write. In India, with 200 different languages spoken, posters depend almost entirely on pictorial treatment to tell a story. For instance, an

Indian advertiser never uses North American technique by showing a picture of a pretty girl to advertise toothpaste, but is careful to demonstrate pictorially the actual use of his dentifrice. A more recent example of this problem occurred in the Indian elections in early 1952. A special symbol had to be evolved for each political party so that the photograph of the candidate plus his party symbol would constitute an effective election poster.

Construction of Poster Panels

Steady improvement has brought many changes to poster panels. Early posters were mounted on long rows of panels, often in two tiers, but recently mouldings have been introduced, each panel has been made a separate unit by the use of blanking paper, and the number of panels at a location has been steadily reduced so that the panel of today makes an attractive and well-maintained frame for the advertiser's message.

Posters in Canada appear on panels 25 feet long by 15 feet high showing a design of approximately 20′ by 8′ 7″. The structure may be attached to a wall or built of solid framework with a posting surface of galvanized sheet metal. This surface may alternately, under conditions of steel shortages, be of plywood. A group of two or more poster panels is known as a "poster plant". There are 263 such poster plants across Canada operated by 52 different companies.

Location of Poster Panels

Just as the advertiser who buys magazine advertising space will try to get a publication location which will make it impossible for the reader to skip his advertisement, so the poster advertiser, who buys space in your town, plans to expose you to some of the panels carrying his advertising message . . . regardless of where you work, play, shop, or move in traffic in that community. The operator of the poster plant therefore locates his panels at strategic points in the community to provide just such a representative coverage.

This coverage is provided on or near traffic arteries in commercial and industrial zones which dominate the traffic flowing to and from adjoining residential or rural districts. The market characteristics of a town determine the number of posters required to give a representative value in poster advertising coverage. This is appropriately called a representative showing, the standard unit in which posters are sold. An advertiser who wishes to vary the intensity of his effort may buy a larger or a smaller showing in each posting district. In metropolitan centres other smaller showings are sold. For instance, a representative showing in Toronto consists of 60 panels, 30 of which are lighted, but other showings available are 90, 30, 20, and 10 panels.

Illumination of poster panels began in Montreal and Toronto in 1920. To deliver complete coverage in larger communities, a proportion

of panels on well travelled thoroughfares in 64 cities are now lighted in order to extend the area coverage to a maximum 24 hours a day. In a representative showing across Canada, lighted panels form approximately 28% of the total.

During the early days, poster panels were often concentrated in great "batteries", 20 or 30 to a group, sometimes covering a whole city block in frontage. In fact, Neilson's Chocolates at one time took such a batch of panels, about 15 in number, and posted the same design on each board in an experiment in advertising concentration. That is no longer possible as rules of the Poster Advertising Association forbid the posting of more than one similar design to a location or even a grouping of designs of competitive products at one location.

The trend in location of panels has been a steady reduction of the number of posters appearing side by side on the same plane. This has not caused a move towards single panel locations, but has meant a reangling of panels to obtain greater impact. For example, where three or four panels might have been located on a downtown street intersection, the policy has been to divide them into a V formation so that they would influence traffic from two opposite directions. As these improvements have progressed, the number of poster panels to a location has been reduced until today it averages 2.3 for all Canadian plants.

At today's property values very few operators can afford to own their own locations, so the majority of panels are located on leased land. These leases vary considerably in rate and the variations in turn have a bearing on the number of panels built at one point. A more expensive site will necessitate the erection of several panels in order to give the advertiser representation at the key point in question and at the same time keep the cost within the quoted poster rate. All poster leases are, of course, subject to cancellation on one month's notice if the owner requires the property for building or any other use of his own.

The entire question of panel location for advertising effectiveness places the poster plant operator right in the middle of problems of population movement in a growing community. Downtown areas lose importance, and large, new residential districts and shopping districts spring up in outlying territory. The advertiser naturally wants adequate representation in each such development. The result is an almost continual movement of panels to maintain good coverage under rapidly changing conditions. In some expanding Canadian communities, this costly movement has involved as much as 20% of the poster plant in one year.

Measurement of Circulation — The Traffic Audit Bureau

As the principal basis of value of poster advertising has been circulation, the traffic count naturally has been as much a part of poster plant equipment as knee pads to a hockey team. Almost from the earliest days, accurate counts of passing traffic were a vital selling tool and were regu-

larly submitted to the advertiser in support of value. As the advertiser turned more and more to scientific method, he demanded with poster circulation figures the protection of validation by an unbiased authority.

This posed a tricky problem. The circulations of newspapers and magazines had for some years been audited by the Audit Bureau of Circulation, but this had been possible by routine bookkeeping methods. The poster medium needed much more than a straight audit. It required an entirely new formula for measuring the flow of traffic. In 1936 the Traffic Audit Bureau was formed to audit poster advertising circulation and to conduct further research in the poster medium as indicated.

TAB is a tri-partite organization, sponsored and directed by the advertisers, the advertising agencies, and the poster industry in the United States and Canada. Its costs of operation are paid by the operators, whose poster plants stand to benefit in prestige by the acceptance of TAB audited circulation.

TAB audits are based on normal traffic counts. The formulae carefully avoid variations by making the counts in either spring or fall months, avoiding the lower volume of winter or peaks of summer; similarly, the time of day is always mid-morning or mid-afternoon. The auditors count the number of people passing specified counting stations. They include pedestrians, people in automobiles, and, by actually travelling in street cars and buses, the number using public transportation. A projection of this figure for an 18-hour period gives the "gross advertising circulation". Because all this circulation could not have faced in the direction in which the poster panels would be seen, only one-quarter of the street car and bus traffic and one-half of the automobile and of the pedestrian traffic is used to give what is known as "effective circulation" for one day. Effective circulation is further qualified by any limiting factors of visibility of the poster, based on a measurement of traffic speed and approach, to arrive at the "net advertising circulation" or NAC.

This is a definite answer to the question, "How many people can see posters?" The NAC figure usually ranges between one-quarter and one-third of the population. However, this does not mean that only one-third of the population sees a poster showing. In fact, it still does not prove that anybody actually sees it. Thus the next research step of the industry was to ask the question, "How do we know posters are seen?" and to advance to a study of the penetration of a given market.

Recall and Remembrance

Early attempts to measure the impact of poster advertising usually took the form of recall and remembrance studies. In the Canadian field the best known of these was conducted by Canadian Facts in 1948 for the Poster Advertising Association.

LOUISIANA STATE UNIVERSITY LIBRARY

While advertisers still like to have access to this type of information, they have accepted the fact that it does not constitute a proper study of the markets reached by the medium. It is a valuable form of copy research and exactly parallels the service sold by Daniel Starch and Staff to advertisers and advertising agencies in studying the readership of newspaper and magazine ads. This type of outdoor copy research is available in the U.S. through two separate organizations—Marion Harper Associates, New York, and Poster Appraisal Service, Reseda, Cal. It is expected that the Harper technique will shortly be available to Canadian advertisers and agencies.

There are, of course, problems in applying "recall and remembrance", or "seen and noted" of publications, to posters. For one thing, the written message has usually been masked when plans of the posters are shown to the respondent. In some poster copy, the trade name is such a large part of the layout that its removal wipes out the whole design. The repetitive nature of posters poses another problem. A magazine or newspaper ad is generally used once in a specific campaign. Thus when the respondent tells a researcher that he or she has "seen and noted" a certain ad, it can be so scored. Posters, on the other hand, are literally everywhere in respect to traffic exposure to them, and thus it is virtually impossible to measure the effect on one person of a poster at a single location. In other words, repetition, the great asset of posters to the advertiser, rules out "recall and remembrance" as an effective device to measure its audience.

Identification of the Poster Audience

Veterans of poster plant operation and promotion will tell you with force and conviction that estimating the poster audience in a community is simplicity itself — posters are seen by everybody who goes outdoors, and the only people who do not go outdoors are sick, crippled, or imprisoned. This is based on the logical principle that the entire outdoor-moving population in any communal boundary is naturally and inevitably exposed to posters without paying an admission, buying anything, or otherwise expressing a wish to be exposed to the advertising message.

The most comprehensive tests concerning poster audiences were successive and progressive studies conducted by the Traffic Audit Bureau at Fort Wayne, Ind. and Cedar Rapids, Iowa. The latter survey, in a town roughly similar in size and make-up of trading area to London, was based on a diary record of the exact outdoor movements of 479 residents of the city. It showed that 93.1% of the people 10 years of age or over were exposed to an average poster showing — a representative showing, according to poster terminology — in a 30-day period. The figures further proved that the average person in Cedar Rapids was exposed to a representative showing 21½ times during the month.

Because of the similarity of conditions and because the figures confirm individual studies by poster engineers and advertisers, these results have proven of significant interest to users of the medium in Canada. During 1952 some purely Canadian validated studies will be conducted for the Poster Advertising Association in order to expand this established information on the nature of the poster audience. They may examine posters in their relation to a larger community including within it specific separate trading areas of different sizes.

Current census figures show that of Canada's population approximately 57% is classified as urban. Poster plants in Canadian communities reach 93.5% of this urban population. However, this is by no means an accurate measure of market coverage since in the numerous towns of less than 2,000 population almost the entire farm population within a wide radius is continually exposed to poster messages. In some cases, posters represent the only advertising medium contacting many rural citizens.

Posters and the Community

Posters are a vital medium of communication in any community where they appear. They have assumed important roles in enlisting and coordinating support during wars and national emergencies from the days of World War I. One of the highlights of poster support during the first war was the production and display in Montreal's financial district of a Victory Loan design, 66 feet by 33 feet, the largest poster known to have been used in Canada.

During World War II the Government accepted an offer of the Poster Advertising Association to render a coordinated service, including all forms of outdoor advertising, in the interests of all branches of recruiting, Victory Loan Campaigns, War Savings Drives, and practically every phase of the war effort. Many national advertisers also adapted their outdoor advertising programs to swell this support. This took the form of many specially-designed posters such as the well-remembered Canada Packers' design of the five pigs and the freighter under the slogan, "Four out of five are going to England."

The cause of safe driving has been effectively pleaded on both posters and painted bulletins by provincial highways departments. Local safety campaigns in all parts of Canada have benefited by the cooperation of poster plant operators.

Community Chest, district charity drives, and all appeals for emergency effort use posters to get the maximum local impact. At election time posters become a political medium of communication, now assuming new importance with the increasing number of foreign languages being spoken in Canada.

One of the best examples of the intimate role that posters play in helping the community has been a series of "Come to Church" and asso-

ciated designs intended to encourage attendance at church and Sunday school. They are prominently displayed without any charge by plant operators. This gesture has elicited favourable comment from clergy all over Canada, including numerous enquiries as to the availability of the same illustrations in the U.K. and overseas.

Occasionally public statements indicate that posters tend to hide beauty spots and scenic locations in a community with a commercialized message. In practice, this is not ordinarily true, principally because this type of location does not represent heavy traffic circulation near retail outlets and therefore has inferior advertising value.

A desirable poster location is often in an unattractive part of the city. It may be a corner parking lot on ground where a large building has been razed, leaving dirty brickwork, old wallpaper, and old construction framework exposed. It may be a vacant lot between stores. It may hide the untidy clutter of the yard of a small factory. A large number of such locations are definitely improved by the erection of brightly-painted, well-maintained poster panels.

A most unusual approach was made to an outdoor firm recently by officials of a large Canadian city. They requested that the poster firm enter into a cooperative arrangement to incorporate poster panels in the construction of a civic parking lot. This was readily done and the result was a neat and much improved appearance of the final project.

Posters and Legislation

The variation in legislative regulations applying to poster advertising in Canada are as great as you would expect in gradations of opinion between Canadian provinces generally. These are highway statutes and laws affecting local business or traffic arteries and therefore do not include federal rulings. Outdoor advertising may be dealt with by the province, township, or municipality and often combinations of the three.

There are some universal similarities in provincial laws, mainly the provision which forbids poster panels on express highways or, as termed in Ontario, Controlled Access Highways. There is no disagreement on this point because the "open road" location is not highly rated for advertising value. Most provinces require yearly permits at varying fee rates for erection of any outdoor advertising structure on the highways and maintain a staff of inspectors to see that these rules and those covering any buildings permitted near provincial highways are followed.

Among some special legislative provisions is an important Ontario ruling specifying that any municipal traffic artery to which the provincial Government contributes money for maintenance is under provincial jurisdiction for enforcement of all highway statutes. That means that such streets as Danforth Ave. in Toronto operate under the same provin-

cial regulations as highways on Manitoulin Island. Some centres, such as Lindsay, may have as many as four main streets operating under this jurisdiction.

Local regulations across Canada vary so greatly and change so often that it is impossible to trace an accurate pattern at any one time. Where a local permit is required, an annual fee, often termed an inspection fee, is usually charged. There may be special taxation such as the provision in some cities that poster plant operators must pay a regular business tax on each panel in use. As the composition of a poster plant is mainly within municipal limits, the operator's principal dealings are with the municipality.

Duplication of taxes is frequent, usually where outside rulings apply to local traffic thoroughfares. It is thus possible for an operator to pay as many as three annual fees or taxes. This happens on numerous Toronto locations where a business tax is paid on panels, as well as fees to both the province and the city.

General harmony prevails between enforcement officials and poster plant operators in observing the various rulings. In most cases inspectors are familiar with outdoor operation and are consulted in advance on panel changes. Poster plant operators prevent corporate or individual friction by refusing to locate panels at points concerning which some objection has been filed.

Poster Advertising Association

All poster plant operators in Canada belong to the Poster Advertising Association, which has for 50 years operated with the general objectives of improving the quality of posting, standardizing construction and posting methods, and getting the advertiser more for his advertising dollar spent.

Specific services rendered by the Association include: (1) inspection of every poster panel in Canada at least once a year, (2) appointment of authorized solicitors of poster advertising, (3) making available to members special suggestions on more effective methods of construction and plant maintenance, (4) observation and correlation of all zoning and other regulations of local, provincial, and federal governments affecting posters, (5) provision to advertisers and advertising agencies of regular schedules of poster rates as set by each plant operator in Canada, (6) formulation of rules and regulations for the acceptance of copy to maintain standards of good taste, and (7) continual examination of Canadian marketing and buying habits and the proposal of special research studies as needed for the benefit of users of the medium.

The Sale of Space

At present 10 firms are authorized by the Poster Advertising Association to sell posters on a national basis. Naturally every plant operator

makes his services available to local advertisers in his own area. Most of the ten soliciting firms also operate poster plants, but this is not necessarily a qualification and at least one organization has built an enviable reputation as a solicitor although it does not own poster panels. The prerequisites for selling poster space are merchandising ability and a thorough knowledge of the requirements of advertisers and advertising agencies.

Most forms of national advertising, including posters, are usually placed through advertising agencies. Thus the poster solicitor deals primarily with the agency, and, following consultations of solicitor, agency, and client, an approximate schedule of poster showings is prepared. The price quoted in the schedule covers the entire cost of posting and maintenance in the towns listed. This is on the basis of estimated costs for one or more periods of one month.

When these estimates have been approved a contract is placed with the solicitor, who then confirms space requirements in contracts with poster plants across Canada. (The cost of producing a poster is not included in any of these contracts. This usually originates with the advertising agency, with the actual design resulting from conferences between agency, client, and lithographer.) The solicitors' services regarding price quotations and space confirmations are indeed invaluable to national advertisers.

Poster Design

Posters have presented a keen challenge to the designer. Poster effectiveness is based on pictorial presentation, the process of presenting a message to people by means of a picture, a symbol, or the use of a few words. This impression is received at a glance. Thus a poster must be arresting enough to stop the passer-by and deliver a definite message within a few seconds.

Only a direct, attention-getting technique achieves the ultimate objective. Prominent display of the package for instant customer identification, a humorous or conspicuously human figure, and always short, "punchy" copy have proven most effective; more than half a dozen words invoke the law of diminishing returns. What is correctly termed the "catalogue page" treatment of some advertising is poor poster layout because it wrongly assumes that the passer-by has time to examine models or leisurely read a message. All the best-remembered posters — Bovril's "Alas! My Poor Brother!", Magic Baking Powder's policeman, the more recent Ford illustration of the greyhound and the scottie ("No use, Mac! It's a Ford!"), and many others — have abided strictly by the rules of pictorial presentation.

The creation of a poster design requires careful study if it is to be coordinated with the art treatment of a national campaign in several other media. A short but conspicuous copy theme and probably a special

staging of the package or a central figure of the campaign must be made the basis of a simple, uncluttered layout. It is dangerous to try to use even street car card designs for posters, because the exposure of a car card is entirely different, allowing time for the rider to read longer copy. Better answers have been found for all these problems with increased participation of the advertising agencies in poster planning.

Nearly all posters seen on Canadian boards are lithographed. This treatment guarantees the required fidelity of reproduction. Some advertisers, who use the same designs as their American parent companies, import U.S. produced posters, but many are produced in Canada. For postings needing quantities of from 30 to 300 posters, a poster can be run by silk screen process in flat colors and a minimum of detail. On infrequent occasions hand-painted posters are used in still smaller runs.

Economy of design is a major factor today with every advertiser and requires the closest cooperation between advertiser or agency and the lithographer. Naturally, if an elaborate pattern covers the entire 20′ by 8′ 7″ poster area, the cost of production will be excessive. The careful use of a few selected colours on separate sheets can lead to a multicolour effect at a reduced cost and at the same time make a better frame for the package, slogan, or focal point of the design. If a French poster is planned, the producer is careful to ensure that translation of copy does not require an entirely new design for the smaller run in French. Some large advertisers also make substantial savings by producing two or three months' requirements of some designs, repeating the same poster later in the same year or during the following year.

Poster Rates

Poster rates are set by individual plant operators and made available to advertisers and advertising agencies by the Poster Advertising Association in a schedule issued semi-annually. In comparison with rising rates for advertising media generally in the last ten years, they have lagged slightly behind the general increase. Individual operators point with pride to this as an unusual achievement since operation of their medium actually brings them into the high costs of building construction in their heavy use of wood framework, steel for sections, and paint.

Users of Poster Advertising

The advertising experience of users is an excellent yardstick for any medium. Posters have been very fortunate in having numerous success stories over the years. Many of the products seen on the boards today have been appearing with very little interruption for 15, 20, and 25 years. In some instances the solid establishment of the product is inseparably linked with its use of outdoor advertising. Coca Cola is a notable example. Almost from the founding of the company, "Coke" has been a strong and successful user of outdoor, always well integrated with other forms of advertising.

All types of food products use posters as a reminder to their prospective customers when they are on their way to buy. Many of these food manufacturers go an important step further and synchronize their poster advertising with special point-of-sale and store displays of the products covered by "outdoor". Seasonal products from antifreeze to bathing suits find that posters give mass circulation in key localities during the crucial and often brief buying season for their product.

Far-sighted planning led Nash Motors to an outstanding success. The company wanted to use a conspicuous advertising medium or combination of media to leave a firm impression of size comparable to the big three of the automobile manufacturing world. They turned to posters and laid out in advance an intensive campaign for a five-year period. Backed up by good copy and heavy circulation in both the United States and Canada, this campaign made a striking impression on the public and drew attention out of proportion to the actual size of the firm. So good were the results that the same general program is now well into its second five-year period of operation.

A Canadian insurance company has pioneered the use of the impact of posters on both sides of the border to spread the idea of life insurance protection and thus ease the approach for its agents. The Great West Life Assurance Company cites these reasons for its steadily expanded use of the medium since 1934: (1) builds name acceptance, (2) tremendous cumulative effect, (3) the agents value its support, and (4) has impact to strike against consumer indifference.

Poster Limitations

Nobody has yet created the perfect advertising medium. Each one has its own distinctive characteristics which give it high efficiency in merchandising some products and permit only an indifferent performance in others. This is as true of posters as any other.

Posters are not a flexible medium. Most advertising media can be adjusted to account for changes in demand. Newspapers and periodicals can expand or contract any issue to provide for advertising peaks. Even radio has been able to enlarge its capacity with new stations and new networks. On the other hand, good poster locations in a community are limited in number. As poster coverage of a market is based on the rise or fall in size of that market, the plant cannot fluctuate with changes in the volume of space demands. Thus scarcities of space in some localities are inevitable during these peaks.

Space contracts and all poster planning and production must be put in hand well in advance. This does not help the manufacturer who may have to cope with sudden changes of product or quick introduction of new products for national distribution.

Posters are not a selective medium. They will not, except by manipulation of copy, pick out a particular age or income group in their mass appeal to the large outdoor-moving public.

Poster Features

Probably the greatest tribute ever paid to posters arose from an objection to some poster copy which, it was pointed out, had appeared in most other Canadian advertising media. One man's comment, "But posters are so public!", quickly accentuated the strongest characteristic. A poster is large. It is colourful. It is public. It dominates the attention of all people who go outdoors every day and just cannot avoid posters.

To most advertisers, repetition is the "priceless ingredient" of an advertising medium. This repetition with the need for simplicity in a poster message is a great advantage in brand name merchandising. By influencing people to buy specific branded merchandise when they shop, posters perform an important function in moving advertised goods from retailers' shelves.

The poster art technique of picture presentation adapts perfectly to the distinctive, major marketing fact of Canada — the bilingual nature of our country and many of its markets. It appeals not to special sectors of the population, but to every age, income, and language group.

As Canada has grown, advertising has developed a more and more efficient service in the marketing of the products of Canadian industry. Outdoor advertising has utilized and expanded special qualities as a method of reaching all Canadians in our important markets, and this medium is a key factor in the system linking the producer to his local distribution.

New Approaches to Accident Prevention

R. G. D. Anderson

Accident prevention presents a continuing challenge to industrial executives. In this article, Mr. Anderson outlines the Industrial Accident Prevention Associations' eight-point plan for safety, suggests methods by which the program may be effected, draws attention to the tangible and intangible costs of accidents, and finally seeks action aimed at reducing their toll on the part of industrialists.

WHAT is new in the field of industrial accident prevention? Have the employers of Ontario made progress or lost ground in the continual struggle to prevent accidents in the plant? What are the prospects for the future?

These are not easy questions to answer. We know what is being done and what can be done. The great problem is to convince thousands of small employers, and through them tens of thousands of employees, that accident prevention really pays. The Workmen's Compensation Board of Ontario now collects assessments from more than 47,000 firms of which 17,508 are engaged in manufacturing industries whose accident prevention activities are aided by Industrial Accident Prevention Associations. Each of these employers has it within his power to prevent accidents in his plant.

The Eight Point Plan and Its Effects

To aid these employers the I.A.P.A. has developed and recommends an eight point plan, and where this plan has been adopted the number and severity of accidents has dropped sharply. There are plants within our membership which have a record of three million man-hours worked without a lost-time accident. Other, and smaller, plants may go for several years — in one case nine years — without an accident.

In brief, the eight points in this plan are:

1. Safeguard all machinery and processes.
2. Train supervisors in accident prevention methods.
3. Provide adequate first aid.
4. Keep accident and compensation cost records.
5. Investigate accidents and make regular plant surveys.
6. Provide safety education.

8. Guard the health of all workers.
7. Control dust and fumes.

These points and the general plan are not new and untried; they have been effective in securing excellent results in many individual cases. The general effect of this plan over the entire membership of Industrial Accident Prevention Associations in the past thirty-five years has been to reduce the number of fatalities and permanent disability cases in spite of the three-fold increase in the number of industrial employees. One evidence of improved safety conditions is that accidents caused by machines have been reduced from forty-two per cent to eight per cent of all industrial accidents reported. Here the provision of adequate guards for machines and the proper training of workers have made a great difference over this same period.

Nevertheless, while the serious cases have declined in number, the less serious cases have increased. This shift may be partly due to the thousands of new employers and new employees who have come into industry and must become familiar with the operation of the eight point plan or some counterpart. In addition, injuries which formerly went unreported unless infection occurred are now given immediate attention and show up as medical aid cases or temporary disabilities.

Techniques for Safety Education

What is new in the field of industrial accident prevention in Ontario and elsewhere is the constant addition to, or extension of, the educational techniques which are inherent in our eight point plan. An increasing number of firms are adopting, or adding to, Job Instruction Training programs, in which the worker on a new job is not only shown what to do and how to do it, but also informed of any hazards that exist and taught how to avoid them. Many of our inspectors in I.A.P.A. are qualified to train foremen in the analysis of jobs which come under their direction. These foremen in turn can instruct the workers, and this instruction at the machine or at the bench is an important key to the prevention of accidents. Increasing recognition of Job Instruction Training and its adoption by more and more industries are most encouraging developments.

Another approach is the introduction of short courses in the technique of handling men — applied psychology taught by highly qualified industrial psychologists. It has been found in actual studies that foremen who know something about human relations have better records with respect to both production and accident prevention than do foremen of the "treat 'em rough" school. I.A.P.A. has sponsored short courses in human relations which were conducted by Dr. J .L. Rosenstein of Chicago. These courses were well attended and enthusiastically received. We expect to continue them and hope that over a period of time they will result in more effective plant organization for accident prevention.

Visual education by motion picture and sound-slide films is an effective tool in accident prevention. Ontario industries can secure a large variety of films from the I.A.P.A. film library and other sources. Greater emphasis on this form of education will point out the need and desirability of taking every precaution to avoid accidents — not only to more workers but also to their employers.

A Practical Example of Building Enthusiasm

The Wise Owl Club is a relatively new and dramatic development in the prevention of eye injuries. Organized by the National Society for the Prevention of Blindness in New York and sponsored by the I.A.P.A. in Ontario, this club has an exclusive membership of men and women who have saved their eyes by wearing safety glasses on dangerous jobs. There are now forty Ontario company chapters in the Wise Owl Club. These Chapters have a membership of 209 individuals who provide constant testimony to the value of taking proper precautions to prevent eye accidents, which can result in great tragedies not only for the person directly involved but for his or her family. We now have a great many employers in Ontario who provide safety glasses for their workers and insist upon their use. One company alone spends $9,000 on its safety glasses program every year.

The Use of Statistics

Improved methods of collecting and analyzing accident statistics can lead to greater realization of what accidents mean and how they can be more efficiently prevented. The I.A.P.A. is seeking to improve the collection of statistics so that ready comparison can be made of the accident record in this province with that of neighbouring provinces and states or the record of one company can be analyzed in the light of the record made by another company in the same field.

The I.A.P.A. urges company managements to maintain their own statistics on accidents and accident costs. Where this is done there is invariably an improvement in the accident record. One large company has gone outside the plant to study what happens to employees in their leisure hours. This study revealed that employees suffered three times as many serious accidents off the job as in the plant. By far-sighted instruction in the principles of safety, management can assist in reducing the accident toll not only in the plant but on the highway and in the home.

Steps to Safety in the Plant

One of the best ways of reducing accidents in industry is to study the places in the plant and on the job where accidents occur and then take steps to prevent similar accidents in those places in the future. The I.A.P.A. inspectors now tabulate the reports received from the Compensation Board of serious accidents occurring in plants employing fifty

or more and study the results closely to find where accidents happen in a given plant. These observations are presented to the plant management together with information concerning payments which the plant has made to the Workmen's Compensation Board and payments made by the Board.

A Breakdown of Accidents

It is an unfortunate fact that in Canada we have no central agency such as the National Safety Council in the United States which collects and promptly distributes the statistics on accidents of all types, but the Department of Labour in Ottawa is now endeavouring to standardize accident statistics in Canada. An unofficial compilation of accidents in Ontario during 1951 shows the following results:

	Fatalities	*Injuries*
Fire	143	391
Home	785	116,965 x
Drowning	264	———
Industrial	421	202,224
Traffic	945	22,000
	2,558	341,580

x—Estimate

From available figures it would appear that the direct costs of accidents in industry, on the road, and in fires, would exceed $61,000,000. When indirect costs are included, this figure would exceed $300,000,000. Accidents in the home, for which no figures are presently available, are not included.

The first meeting of representatives of various Canadian organizations from coast to coast which are interested in the prevention of accidents will be held late in April this year. Out of this informal meeting there may evolve a plan which will lead ultimately to a more coordinated effort in all fields of accident prevention on a nation-wide scale. In any event, this meeting is a new step in the right direction.

The Cost of Industrial Accidents

There is a good reason for action since preventable accidents cost Canadians literally hundreds of millions of dollars each year. With the first Workmen's Compensation Act in Canada, the figures of the Workmen's Compensation Board in this province provide the best available long term source of statistics from which it is possible to arrive at some indication of accident costs in industry in one province. Other provincial boards also maintain statistics, but a study of some figures from Ontario, where the work of industrial accident prevention has been developed over a period of thirty-five years, will probably be most fruitful.

There were 202,224 accidents reported to the Workmen's Compensation Board of Ontario in 1951. Of these, 421 were deaths. Payments made by the Board totalled $24,999,520.75. These funds, in turn, were provided by assessment on industries coming under the jurisdiction of the Board and ultimately, therefore, by the consumer.

These bald figures, of course, fail to reflect the real cost of industrial accidents. No figures can ever represent the pain, suffering, and fears involved on the part of the injured workman and his dependents; nor do the figures show the real cost in dollars and cents — terms which are highly important to any alert management. From long, nation-wide experience, it is now known that the indirect costs of an accident are four times greater than the direct costs. Thus for every $100 paid in direct compensation and medical aid there is a hidden cost of $400 for lost time, damaged materials or machinery, lower production from other workers, etc. Thus the accident which costs $100 in direct compensation actually costs $500 after indirect charges are added; and this $500 represents a net profit of five per cent on sales of $10,000.

Upon management rests the responsibility of reducing the toll of industrial accidents, which last year in Ontario alone cost industry some $125,000,000 in direct and indirect charges. If this figure seems appalling after thirty-five years of expanding effort on the part of management, that is all the more reason why the situation should be faced by an interested body of industrialists as it has been faced so successfully by many individual companies.

Steps Towards Prevention — A Program for Action

Take, for example, the record of one large Ontario company. When a safety committee was organized to study the accident problem and was given the support of management, the accident frequency and severity rate dropped sharply, and this company has completed well over 1,000,000 man-hours without a lost-time accident. Here are the figures that speak for themselves:

Year	*First Aid Cases*	*Lost Time Cases*	*Frequency*	*Severity*
1945	No record	25	37.7	.474
1946	118	3	5.23	.063
1947	46	1	0.017	.013
1948	12	0	0.0	.00
1949	10	1	0.00016	.0016
1950	18	0	0.0	.00

This record, however, is not unique. In 1951, twelve large Ontario plants did not have a single lost-time accident, while many others had most enviable records. Through I.A.P.A. some 300 Ontario firms, each

employing 250 employees or more, are now reporting their monthly accident experience. These reports are available for comparison with the experience of other large firms in the same class of business. Thus within this group of larger companies, employing more than one-third (226,000) of all factory workers in the province, there is a firm basis for competition directed towards the reduction or elimination of accidents.

While the basic principles of accident prevention are not new, the application of these principles is constantly being improved or adapted to meet new conditions. Today, in Ontario, there are more than three times as many industrial workers as there were in 1920; the number of employers has more than doubled. Yet, in spite of the great increase in exposure to accident, there has been an actual reduction in the number of deaths and permanent disability cases due to industrial accidents. As our industries continue to expand, management will be confronted with a perpetual challenge to reduce or eliminate accidents. There is no "royal road" to accident prevention, but accident prevention is easy if we work hard enough at it.

Government Regulations and Business Records

A. A. Sterns

Necessary governmental interference in business has led to a complicated series of regulations regarding the manner in which business must present its financial statements and calculate certain of their basic components. Dr. Sterns discusses some of the effects of governmental control on accounting practice.

IT has been asserted that until recently governmental influence upon business methods was not noticeable. This statement is probably true, since government in general was very reluctant to interfere with the operation of the machinery of "free enterprise", the captains of business and industry were strong, and economists and philosophers were preaching their dogmatic logic of "laisser faire, tout le monde va bien".

While interference by the State in many fields of human endeavour is increasingly advocated, business methods have been remarkably free of such interference. This is especially true of accounting, an applied business method which has no dynamic force, but is rather an indicator of the fulfillment of important business functions. Since the days of the Florentine merchant, accounting methods have changed relatively little. The purpose of accounting is still the concise and the honest interpretation of the purposes of business: "to show profits and to accumulate wealth". Accounting depicts in figures what business does materially towards this ultimate goal.

The complicated structure of our social economy with its ever-increasing variety of implications has, however, had some effects on developments in the field of accounting. Since accounts and records are part of the business machinery, in which interference has noticeably arisen, we could not logically expect independent development.

The trend towards interference is not peculiar to any single country, including Canada, but is universally noticeable. In fact, on this continent we are still favoured with relatively little interference. Our basic democratic institutions will prevent any interferences, regulations, normalizations, or dictations unless certain basic circumstances call for mild regulation. Then the dictation derives from the governing principle of "public interest", rather than from the activities of pressure groups or powerful individuals as is the case in totalitarian states.

Basic Corporation Laws

Certain norms with respect to accounting are laid down in acts governing the formation of corporations. For many years these were the only known codified prescriptions regarding the proper maintenance of books and accounts. Basically, these laws, as applied in various countries, have only prescribed the necessity for keeping books and accounts, the place in which such books and accounts are to be located, the preparation of balance sheets and profit and loss statements, and the necessity of audits. Whenever features of the content of accounts were specified, as is the case in the Canadian Act (an Act respecting Dominion Companies 25-26 George V, Chapter 55), accounting principles as applied in any sound business organization were followed. For example, Section III of the Dominion Act prescribes such common principles as:

"Every company shall cause to be kept proper books of account with respect to—

(a) all sums of money received and expended by the company and the matters in respect of which the receipt and expenditure takes place;

(b) all sales and purchases by the company;

(c) the assets and liabilities of the company;

(d) all other transactions affecting the financial position of the company."

Again, Article (2) of Section 112 enumerates details concerning balance sheet preparation which to the greatest extent are common and good accounting applications. Legal protection of the shareholder is naturally the keynote and basic element in this case.

Such legal requirements influencing or regulating accounting methods stem not only from laws governing partnerships and limited companies, but also from laws regarding negotiable instruments. However, despite the relative stringency of these legal codes, only few businessmen would admit to seeing therein the beginning of more stringent regulation. Laws of this kind are created by the demands of business itself, and in adhering to such laws no hardship is encountered.

Business, therefore, while tolerating such laws, will protest if the strings attached to the applied methods have little bearing on their own interest, and more so, if such regulations are connected with their duties as a collection agency for the state. The army of auditors which is established to see that such laws are enforced is anything but welcome to the businessman and industrialist.

It is therefore very understandable that the indignation of businessmen reaches a peak not only when they are told how to keep their books, but also when, as a result of figures in their prescribed financial statements, they have to pay large sums of their earned profits to the State

Treasury. In such cases we hear them loudly condemn governmental practice.

The Government as a Customer

Then there is also an opposite relationship between government and business. The more the government collects in taxes, the more it spends in the form of expenditures. The State thus becomes the largest single customer of business and is courted with all due respect. However, while ordinary customers are in a position to use traditional business methods usually dictated by the economic laws of supply and demand, the State is very often in a difficult position where competition for many reasons is excluded and methods of buying become unorthodox. The public would never be satisfied if such methods of government procurement were without proper regulating safeguards. It is understandable in wartime or in times of international tension, as is the case at present, when extraordinary materials are produced for the government, that purchasing methods become unorthodox. When buying by governments on the basis of the traditional competitive tender becomes impossible, a form of price fixing must be found. This form of buying has been based on various types of "cost plus" contracts. The simplest form is the contract based on "cost plus percentage profit". Other types are "cost plus fixed fee", "target price", "ceiling price", "cost plus target profit", and the various "labour and material escalator contracts".

Whatever the form of contract, the basic difficulty is the determination of "costs". The accounting profession is not always of one mind when it comes to the interpretation of certain terms. This is particularly noticeable in the case of industrial or cost accountants who have to deal with methods established only over the past forty years. The definition of "costs" itself would bring out the great variety of different interpretations. Governments, for this reason, when forced to deal with "cost type" procurements, have had to develop their own definition, thus bringing interference into the field of cost accounting.

Both the United States and Canada, and undoubtedly many other countries, have been confronted in this regard with similar problems. However, a twofold benefit has arisen from government action in defining costs and enforcing the application of sound principles on this defined basis: (1) a universal creation of greater cost consciousness in industry, and (2) improvement of existing cost systems.

Government Definitions of Cost

In the United States, Treasury Decision 5000 constitutes the document containing definition and interpretation of costs. In Canada the original document of this type, "M. & S. 433" (Department of Munitions and Supply Form 433), has developed into the new "D.D.P. 31" (Department of Defence Production Form 31). Primarily, this document, like

its predecessors, M. & S. 433 and C.C.C. 80 (Canadian Commercial Corporation Form 80), defines cost in a very general way: "The general rule is that the cost of performing a particular contract shall consist only of expenditure made by the contractor in connection with the contract, and shall be the sum of: (1) direct materials, (2) direct labour, (3) direct expenses, and (4) a proper proportion of applicable indirect costs (including a reasonable proportion of management expenses)."

The memorandum then describes the general elements of cost as follows:

"No definitions of the elements of cost may be stated which are of invariable application to all contractors, but in general the elements of cost *may* be defined as:

'(1) Manufacturing Costs

I Direct Material,
including, in addition to materials purchased solely for the contract and processed by the contractor, or material obtained from sub-contractors, any other material purchased for stock, which may subsequently be used and become a component part of the contract, such materials to be charged at net laid down price after deducting all trade discounts and other similar items.

II Direct Productive Labour,
which is performed directly on and is properly chargeable to the contract.

III Direct Engineering Labour,
i.e., the compensation of professional engineers and draftsmen properly chargeable to the contract.

IV Miscellaneous Direct Factory Charges,
containing items properly chargeable to the contract but which do not fall within any of the above categories. (Example: Royalty payable.)

V Indirect Factory Expenses (Factory Overhead or Burden), includes:

(a) Labour for supervisors, inspection, clerical, timekeeping, stores, tool crib, cleaners, watchmen, etc.

(b) Materials and supplies, such as shop fuel, lubricants, waste, non-durable tools, gauges, etc.

(c) Service expenses, such as power, heat, light, operation and maintenance of general plant assets and facilities.

(d) Fixed charges: recurring charges such as property taxes, rentals and provision for allowances in respect of capital cost.

(e) Miscellaneous, such as purchasing expenses, employees' welfare, payments to Federal Unemployment, Health or Pension Funds.

VI Other Manufacturing Costs,
items *not* properly or satisfactorily chargeable to factory costs, to be, however, included as costs of the contract upon a complete showing of all pertinent facts, such as Experimental and Development Charges.

(2) Miscellaneous Direct Expenses
including fees paid for tests, travelling expenses applicable to the contract, etc.

(3) Miscellaneous Indirect Expenses
such as indirect engineering expense, administrative expenses including salaries of corporate and executive officers, office salaries, janitors, cleaners, office and administrative expenses (stationery, office supplies, postage, etc.), reasonable donations to charities.' "

Thus, the definition as contained in the memorandum is little different from any other definition. Theodore Lang's *Cost Accountant's Handbook*, for example, expresses the definition as follows: "The word cost in an accounting sense cannot be defined unconditionally. Cost becomes an individual formula in each business enterprise." "The varied nature of production and the size of the business have something to do with its formulation."

However, what does actually seem strange in this government formula to the industrial cost accountant is the unorthodox classification of the elements. There is no variation as far as "Direct Material", "Direct Productive Labour", "Direct Engineering Labour", "Miscellaneous Direct Factory Charges", and "Indirect Factory Expenses" are concerned. The last item of manufacturing costs, however, points out clearly the difficulties with which government is confronted. "Other Manufacturing Costs" include items which are not properly or satisfactorily chargeable to factory costs, but which, upon a complete showing of all pertinent facts, can be properly included as a cost of the contract. In the United States Treasury Decision 5000, "Royalty Payments, Amortization of Cost of Designs and Patents, and Amortization of Experimental and Development Costs" are specifically enumerated. These items generally are not factory costs. They are either direct costs of an article produced or to be produced (Royalty Payments) or are expenses of a preliminary nature to be charged against some uncertain future production. In the latter case they could be included under administration. The government, however, is not establishing costs for management, but is ascertaining a cost which will become the principal part of the price to be paid. The governing factor here is the requirements of the government rather than classification itself.

Apart from the classes falling under "Manufacturing Expenses", two other main classes are shown: "Miscellaneous Direct Expenses" and

"Miscellaneous Indirect Expenses". Both are different from the conventional groups of "Administrative Expenses" and "Selling Expenses" or "Financial Expenses". Again in their case, the main reason for the classification is the requirements of the contract.

Inadmissible Costs

However, as far as definitions are concerned, no basic interference in established methods can be noted. However, neither U.S. Treasury Decision 5000 nor Canadian D.D.P. 31 stops at the definition. Both rulings lay out especially those types of cost which are inadmissible under government controls. The following will illustrate minor differences in Canadian and American rulings:

D.D.P. 31	T.D. 5000
(1) Allowances for interest on invested capital, bonds, debentures, bank or other loans.	(1) Allowances for interest on invested or borrowed capital, however represented.
	(2) Commissions, bonuses and special premiums under whatever name, paid in connection with negotiations for or procurement of a government contract.
(2) Entertainment expenses.	(3) Entertainment expenses.
(3) Dues and memberships other than in regular trade associations.	(4) Dues and memberships other than in regular trade associations.
(4) Donations, except reasonable donations to charities.	(5) Donations are disallowed except those considered as constituting ordinary business expenses.
(5) Losses on other contracts.	(6) Losses on other contracts.
	(7) Losses from sale or exchange of capital assets.
(6) Depreciation on buildings, machinery or equipment paid for by the Crown.	
	(8) Extraordinary expenses arising from strikes and lockouts.
(7) Fines and penalties.	(9) Fines and penalties.
(8) Amortization of unrealized appreciation of value of assets.	(10) Amortization of unrealized appreciation of values of assets.

D.D.P. 31 (Continued)	T.D. 5000 (Continued)
(9) Expenses, maintenance and/or depreciation of excess facilities.	(11) Expenses, maintenance, depreciation, and obsolescence of excess facilities other than reasonable standby facilities. Such excess facilities include idle land and buildings, idle parts of a building, excess machinery and equipment vacated or abandoned, or not adaptable for use in performing contracts or subcontracts.
(10) Increases in reserves for contingencies, repairs, compensation, insurance, and guaranteed work.	(12) Increases in reserve accounts for contingencies, repairs, compensation, insurance, and guaranteed work.
(11) Federal and provincial income, excess profits or surtaxes and/or any special expenses in connection therewith.	(13) Income and excess profit taxes.
(12) Unreasonable compensation for officers and employees.	(22) Unreasonable compensation. Excessive or unreasonable payments, whether in cash, stock, or other property ostensibly as compensation for services are not to be included in the costs of a contract. The test of admissibility in part is whether the aggregate compensation paid to each individual is for services actually rendered in connection with necessary contract performance, and whether the amount is reasonable. The following items are sure to be inadmissible: (a) Total compensation paid to an individual person in excess of $25,000.00. (b) Compensation which has been increased disproportionately or unreasonably.

D.D.P. 31 (Continued)	T.D. 5000 (Continued)
	(c) Bonuses paid based upon a percentage of the profits. (d) Royalties paid to officers or employees.
(13) Bond discounts or finance charges.	(14) Bond discounts or finance charges.
(14) Premiums for life insurance on the lives of officers.	(15) Life insurance premiums on the lives of officers.
(15) Legal and accounting fees in connection with reorganization, security issues, capital stock issues or the prosecution of claims of any kind against the Crown.	(16) Special legal and accounting fees incurred in connection with reorganizations, security issues, capital stock issues, patent infringement or antitrust litigation, and the prosecution of claims of any kind against the United States.
	(17) Taxes and expenses on issues and transfers of capital stock and bonds; also social security taxes deducted from employees.
(16) Losses on investments, bad debts and expenses of collection.	(18) Losses on investments. (19) Bad debt losses and charges to reserves therefor; also expenses of collection and exchange.
(17) Advertising, except reasonable advertising of an industrial or institutional character placed in trade or technical journals of value for the dissemination of trade and technical information for the industry.	(20) Advertising is an inadmissible item of cost, on the reasoning that it is not required in order to do business with the government. However, advertising of an industrial or institutional character placed in trade or technical journals, essentially for the purpose of offering financial support to such journals and because they are of value for the dissemination of trade and technical information for the industry, are considered an operating expense incurred as

D.D.P. 31 (Continued)

(18) Selling expenses.
(19) Fees extraordinary or abnormal, for professional advice in regard to technical, administrative or accounting matters, unless prior approval from the Crown has been obtained.

T.D. 5000 (Continued)

a matter of policy for the benefit of business and industry.
(21) Commercial selling expenses.

Both rulings, the Canadian Costing Memorandum D.D.P. 31 and the United States Treasury Decision 5000, definitely leave their mark on established accounting methods. It should be said that the Canadian memorandum goes further by tying into costing methods the requirements established by the "Income Tax Act" (11 - 12 George VI, Ch. 52 and amendments). When explaining the allowances for capital cost (depreciation) the memorandum states: ". . . and provision for allowances in respect of capital cost, except that additional allowances in respect of capital cost shall only be an element of cost to the extent expressly provided by the contract". (An interdepartmental ruling restricts such a provision in the contract to extraordinary circumstances.)

"Provision for allowances in respect of capital cost shall be calculated (1) on an amount not in excess of that charged on the books of the contractor, and (2) within the limits allowed under Income Tax Act and the Regulations from time to time established thereunder."

The impact on accounting practices of the new Income Tax Act and the Regulations thereunder has left lasting marks. The most outstanding inroads were in connection with depreciation. Business and industry were forced to change from the straight line depreciation method to the diminishing balance method for computing taxable income. Various enactments, however, have made it necessary for business to set up special records for: (1) double depreciation on straight line basis as a carry-over of post-war legislation, (2) deferred depreciation as a result of the 1950 Abbott budget, (3) special depreciation (additional capital cost allowance) granted to stimulate a defence industry, and, (4) normal capital cost allowance if certificate of necessity is granted or if assets are acquired before 1950.

Thus four different circumstances formulate four different accounting methods to be applied. However, confusion is added when some provinces, for their income tax assessment, demand different methods of accounting (Quebec—straight line write off).

Industries which had specific cost problems to face in many instances decided to ignore Income Tax methods and to initiate a second set of

records in order to distinguish between the legal requirements and their own economic purposes. It is therefore understandable that industry looked critically upon the stipulations in Costing Memorandum D.D.P. 31 incorporating Income Tax Requirements for cost reimbursement purposes.

Reasons for Cost Exclusions

Government officials in most instances will avoid explaining reasons for the rigid character of cost exclusions. Although most of the exclusions fully conform to generally acknowledged principles, some of the arguments in favour of and against certain disallowances would not result in a general acceptance. On December 6, 1951, the Deputy Minister of Defence Production made a statement in this regard before the Special Committee on Defence Expenditure:

"One of these sets of general conditions which is of particular interest is the one known as Costing Memorandum D.D.P. 31. This memorandum sets out the classifications of expense that will be recognized by the Department as properly constituting an element of cost. It has, of course, particular reference to any contract based on cost plus some fixed or percentage profit. It could also relate to a negotiated price contract in which the Department might have agreed to a fixed price, on the understanding that it was based on costs computed on the basis of Costing Memorandum D.D.P. 31 plus a given rate of profit. The memorandum specifies a number of expenditures which may not be included as costs. The two exclusions which are perhaps most noteworthy are interest on borrowed money and selling expenses. This is important because it must be remembered that the rates of profit which the Department sets on some of its contracts are not a net profit to the contractor. The reason for excluding these two items, interest on borowed money and selling expenses, is so that the Department will not be placed in the position of expressing an opinion as to the proper or reasonable amount of such expenses. Interest on borrowed money is clearly an expense of doing business, but the Department could not get comparability in its treatment of various contractors if, in the case of a man largely financed by borrowings, his cost were increased by interest, while his competitor, who might be financed entirely from his own capital, would have no such element of cost in his accounts. What the Department is really saying is that the profit to which it agrees is the reward that it is prepared to pay for the provision of all the capital facilities, including working capital, necessary to carry out the contract.

"In the case of advertising, the Department seeks to avoid the very difficult and contentious question regarding the proper amount of advertising and selling expenses to be incurred by business concerns. It does not deny or confirm the need for such expenses as part of a company's general overhead, but simply says that it will establish a rate of profit out of which the contractor, in his wisdom, may expend such amounts

as he sees fit on advertising and selling expenses. I have mentioned these two points particularly because they are ones which frequently give rise to questions on the part of contractors, and there may still be some misunderstandings as to the reasons for our exclusion of these items."

Other Government Regulations

Not only have government contracts and requirements connected therewith resulted in "red tape descending upon business"; the many forms of subsidies, subventions, and assistance to be received from the Dominion Government have resulted in orders and regulations which affect the preparation of accounting records. The Gold Mining Emergency Assistance Act is a typical example. Assistance is based on cost per ounce of gold produced. Costs are specifically defined for the purposes of the Act and applications for assistance are made on specially designed forms. Since most of Canada's gold mines take advantage of the assistance offered, the resulting standardization of cost accounting methods in that industry is not surprising.

A variety of auditors thus descends upon business to ensure that accountants keep their books and records in accordance with all the requirements emanating from so many sources: the company auditor safeguards shareholders in accordance with certain basic laws, such as the Company Act; the Sales Tax auditor ensures the collection of Sales Tax for the Treasury; the Unemployment Insurance auditor and the Workmen's Compensation auditor check employee benefit collections; the Income Tax auditor verifies the company's returns with regard to the required calculations of profits; the cost auditor develops the costs of government contracts; the Treasury auditor verifies that applications for subsidies, subventions, and assistance are in accord with regulations set in the various acts.

The result on accounting methods is a noticeably greater consciousness of accounting principles. The steady contact business has with professional accountants, even if they are government men, has not only improved the systems in use, but has awakened the senses of accounting responsibility. What on the surface looks like interference, in fact becomes beneficial in many ways. To speak of "red tape" cynically does not place governmental interference in its proper perspective. Interference does not need to be followed by negative result. It should be remembered that in a democracy interference is born of the proper public interest and very often of the interest of the business itself.

Red tape need not be a curse, as long as the regulations which engender it are necessary to avoid misuse of the many instruments working within a large entity. Whether it is a large business concern or the much larger State, to avoid human frailty, activity must be clearly defined and regulated such that no major disharmony undermines the successful accomplishment of worthwhile goals.

The Results of "R.P.M." Legislation

An Informal Survey

This discussion of the effects of this winter's resale price maintenance legislation summarizes the results of a survey of the pricing policies of selected types of retail outlets in London which was recently conducted by MESSRS. D. C. GIBSON AND J. G. WILSON." *senior students at Western's School of Business Administration.*

ON December 29, 1951, the Government of Canada enacted legislation, "the purpose of which is to forbid persons engaged in manufacturing, supplying, or selling articles or commodities from fixing specific or minimum resale prices for such articles or commodities."* This amendment to the Combines Investigation Act was passed to help reduce, through price competition, the high cost of living in Canada today.

Since the passage of this Bill, there has been considerable controversy as to its merits and possible results. A survey was made of twenty-three London merchants in which they were asked to express their opinions of the Bill and the effects it has had on their businesses.

Appliances

A survey of eight appliance retailers revealed that the ban of resale price maintenance has had virtually no effect on pricing in the appliance field. In the large appliance lines, there has been considerable activity during the past two months. This activity is a result of Government retail credit restrictions which required down payments that were too high for the average consumer to meet. This condition, coupled with overstocking by dealers in anticipation of a threatened steel shortage, has brought about a radical change in their merchandising policies.

In order to overcome these credit restrictions and clear the store for the 1952 lines, the retailer has resorted to offering phony trade-in allowances which cover the down payment requirements. (Trade-in policy had always made R. P. M. difficult in the field of heavy appliances.) The manufacturers have encouraged this practice in order

*Bill 36: Fifth Session, Twenty-first Parliament, 15-16 George VI, 1951. The House of Commons of Canada.

to clear their 1951 inventories. In some cases manufacturers have cut their prices to facilitate this clearance.

There has been some price cutting of small appliances. For example, one name brand electric kettle normally selling at the suggested price of $16.50 is being offered for sale by one store at $11.95. The same store also advertises steam irons at a price 25% below that suggested. However, this practice is not widespread in London, and the public does not appear to be responding to it. The retailers offering these articles have found that people are suspicious of the "bargains" and fear inferior quality.

The dealers interviewed felt that the present suggested prices do not give them excessive markups, and that the high cost of operation makes price cutting unprofitable. They are also afraid that price wars might start if price cutting begins. Possibly the most important reason for adhering to the suggested prices, however, is fear of the manufacturer, who, in spite of R. P. M. legislation, is well able to take disciplinary action against dealers who flout the suggested prices. Since most retailers operate on a franchise basis, the manufacturer can legally withdraw the dealership for any one of many reasons. Several retailers feel that the Government has approached the problem at the wrong level and that price cuts can come only from the manufacturer.

Television, Radios, and Records

Radios and records have shown no change in price since R. P. M. legislation. There has been considerable price cutting in television, but such reductions are not necessarily attributable to the legislation. The anticipated opening of a Toronto television station forced retailers to carry large stocks of television sets, which were left on their hands when plans did not materialize. Some dealers were compelled to unload their sets at prices less than cost. Manufacturers also found it necessary to reduce prices. It is therefore impossible to determine what effect, if any, R. P. M. legislation has had on the sale of television sets.

Drug Store Items

Here again little evidence of price cutting was found. A price comparison of cameras, cosmetics, drugs, and smokers' sundries was made to verify the statements of the druggists interviewed. No one has taken steps to violate suggested prices. The high operating costs incurred by the druggists make it impossible to operate profitably with prices below their present level. One local drug chain experimented last fall with a 10% price reduction on a nationally advertised product. He found that sales did not increase, and furthermore, that his action kindled strong objections on the part of the manufacturer. In the drug field the manufacturer wields considerable control over the retailer, for much of the druggist's trade depends upon impulse purchases by customers who are

drawn into the store by nationally advertised brands. The loss of a line would mean the loss of trade.

The fears of the druggist are well borne out by the comment made by the sales manager of a large manufacturer in this field who stated that he would "soon stop that" when questioned on what action, if any, he would take against a retailer who was selling his product at a reduced price.

Paints

Three paint dealers were interviewed, all of whom were both retailers and district distributors, and were therefore able to present both sides of R. P. M. Two of the three admitted that there were suggested prices on all paint and wallpaper lines, but both stated emphatically that the new R. P. M. legislation had no effect whatsoever on the pricing of these articles.

Both felt that high operating costs and consumer confidence in product quality force the dealers to abide by the suggested prices. They stated that paint is a line where price consciousness is almost nil and any that exists is on the part of quantity users who receive trade discounts and other considerations. Consumers would lose confidence in a branded paint if it was sold at varying prices in the same locality. One of the two did mention that an annual sale, usually of the one-cent variety, was sponsored by his manufacturer as product promotion and that a one-cent clearance sale was also held annually to clear the shelves of last year's wallpaper styles. Both felt sure that action of some sort could be taken successfully if a retailer did cut prices.

The third paint dealer insisted that the line he carried never did have a fixed price. He spoke in favour of R. P. M. legislation as a means of introducing competition and so bringing paint prices down. A price check was made in other stores carrying the same brands. In each case the prices were found to be identical.

There is thus little evidence that the Bill has had any effect on the paint business. Present high costs and fear of manufacturer interference appear to be holding the paint retailers in line.

Shoes

Resale price maintenance legislation has had little influence in the shoe industry. Most retailers have shoes made to their own specifications, with the result that shoes, identical in appearance but not in quality, sell at varying prices. This makes price comparison difficult for the consumer and hence price competition does not play the leading role in the shoe business.

Certain brands of shoes, which are nationally advertised, carry manufacturers' suggested prices. The retailers do not feel that these stock lines are overpriced, and it has been the practice to hold to the

list prices. Once more we find that price maintenance is supported on the grounds that dealers cannot afford price reductions.

Women's Clothing

In the women's clothing trade, retailers are not in favour of price cutting. They claim that high costs prevent price reductions and also that consumers are becoming more quality conscious and are willing to pay the premium for high quality. Because of the complex nature of the garment industry, it is difficult to determine the degree to which resale price maintenance is attempted. However, price comparisons revealed a striking similarity among prices of specific "better" lines of women's clothing.

Men's Clothing

The results of a survey of men's clothiers indicated that to date no price reductions have occurred in nationally advertised shirts, slacks, or accessories. The consensus is that both retailers and consumers want standard prices. The retailer needs the markup to cover his expenses, and the consumer, who is becoming increasingly quality conscious, distrusts a product sold below the accustomed price.

It was further stated that the large clothing manufacturers have effective methods of controlling prices without violating the new legislation. Many manufacturers secure distribution through selected outlets, which are therefore at the mercy of their suppliers to some extent. The words of one merchant, "If we play ball with him, he will play ball with us," seem to sum up the feelings of the retailers.

Optical Supplies

It was stated by a local optical supplier that there has never been any attempt to set retail prices. He claimed that not only did each optometrist charge a different price for examinations, glasses, and frames, but also that varying prices were charged depending on the ability of a client to pay.

After comparing the prices of lenses and frames in four shops, it was found that identical prices were charged by each. It appears, therefore, that prices are maintained, whether by agreement or by suggestion on the part of the manufacturer.

Jewellery

There has been considerable price cutting by some local jewellers. Consumer resistance and heavy overstocking in 1951 has brought about widespread price reduction. Although some price cutting was done before the law was passed, it seems safe to say that R. P. M. legislation has encouraged as well as facilitated this practice.

This policy is not followed, however, by all jewellers in the area. One local jeweller said, "The law is definitely not good for reputable

establishments." He feels that he can not compete with those who sell nationally advertised brands at less than advertised prices. He expressed the opinion that the prolonged sales are, in actuality, not sales at all, and have brought chaos to the trade. Another jeweller claimed that his business had been dealt a severe blow.

However, those interviewed felt that many of the products are too high-priced and that before order can be restored, the manufacturer will have to find some way of cutting costs. This is particularly true in the case of plated silver.

It is probable, therefore, that resale price maintenance legislation has brought reduced jewellery prices.

Conclusion

From the findings of this survey, it must be concluded that, with the exception of jewellery and possibly television, recent resale price maintenance legislation has had little effect on business in London to date. However, several of those interviewed felt that possibly future conditions might bring about a change in this situation.

The reasons for the failure of the legislation to bring price reductions are threefold: firstly, the retailers do not want lower prices in view of today's high costs; secondly, the consumers are not yet ready for price competition; and lastly, and perhaps most important, the manufacturers do not want it and in spite of the law, appear to have the power to enforce their wishes.

Governmental Management Analysis

C. James Gardner*

In recent years, government activity has increased substantially, and the question of government efficiency has become paramount. Mr. Gardner discusses management analysis and its specific application to government activities, lists typical "O & M" assignments, and finally points out the significance of governmental management services.

IN recent years there has been considerable development of what are called "Organization and Methods" or "O & M" services in government activities. These are similar to the management services employed by the business community, and are actually concerned with management functions, including organization, rather than with the substantially narrower field of methods. These management functions, furthermore, apply at every level of government organization.

The Meaning of Management Analysis

Management is sometimes considered as just common sense, but it should be uncommon sense. It is common sense to recognize a lump of the earth's crust as such, but it is uncommon sense and wholly through scientific method that one discovers its origin, composition, and uses.

Management is also sometimes considered as an art. In some respects it may be so, but, wherever scientific method can be used to eliminate the element of art, then it will be easier to pave the way for better management.

Scientific method, if it can be described in a few words, is the process of reducing complex problems so that the various elements can be observed and classified to facilitate hypothesis (finding principles) and verification (testing the principles). Applied to management, scientific method has yielded principles which serve as yardsticks for the management analyst.

The principles of management have been the subject of many hundreds of books and thousands of articles written chiefly since the late

* This article represents the personal views of the writer, and not necessarily those of the Government authorities with whom he is associated.

18th century. Many of them are restatements of what has been said before, and many of them are collections of confused thought and garbled language rather than clear scientific treatises. It is therefore not surprising that scientific management is looked upon with scepticism even by those who, being engaged in the much older and purer sciences, such as chemistry and physics, are capable of extending the use of scientific method to other fields than their own.

The management analyst's job is to apply the two-edged sword of scientific method and management principles, blunt though it may be as yet, to the management functions which are outlined below.

Standard Management Functions

The standard management functions which are applicable at every level of responsibility can now be stated broadly. The functions are (a) scrutinizing the objective, (b) planning, (c) organizing, (d) coordinating, and (e) controlling.

The objective is usually set up by someone other than the manager, who is appointed to achieve it. However, he is probably in the best position to examine the objective critically and to show where modifications can be helpful. The management analyst is only interested in the objective if it comes within his terms of reference, as will be shown later.

Planning involves taking continuous account of available resources to see that they are being used most effectively with a view to accomplishing the objective in the most economical way.

Thirdly, the manager must set up and maintain his organization in the way that will best accomplish the objective. Organization will involve (1) dividing the objective into several parts so that much of the management of each part can be delegated to a subordinate officer and (2) for each part, specifying its precise objective.

The function of coordination has two aspects—external and internal. External coordination arises from the fact that the objective is originally raised outside the organization, and accomplishment of the objective has effects outside the organization. Therefore, while the manager may have no responsibility for coordination of his work with outside matters, it should be his function and his duty to make the best contribution he can. Internal coordination, that is, the working relationships of the different parts of the manager's own organization, is definitely his responsibility and is something over which he has sufficiently complete authority to effect given objectives. The different parts of his organization each have their subsidiary objectives, and these subsidiary objectives and their accomplishment must fit together with a minimum of effort and expense to accomplish the main objective of the organization in the most efficient way.

Control involves directing and restraining. The manager must tell his subordinates what to do and he must also call them to task when they diverge from the set courses or unduly slacken their pace. To perform this function he must have certain instruments of control such as key information on accomplishment, on the use of resources, and on the performance of management functions at lower levels.

Management Tools

These management functions find their more concrete demonstration in "management tools" such as the following: (1) policy statements, (2) organization charts, (3) space utilization layouts, (4) procedure charts and manuals, (5) flow charts, (6) job analyses and descriptions, (7) work performance records, (8) recording and controlling systems, (9) work progress reports, (10) forms design, (11) mechanical applications, and so on. It is in the thoroughness and soundness or the superficiality and uselessness of these management tools that the quality of management is exhibited.

Each of these management tools opens up a special field of study which becomes more and more specialized from day to day.

Apart from these concrete manifestations of management, there are certain relatively intangible characteristics concerned with human relationships. These are represented by qualities of leadership, loyalty, etc. They are very often difficult to reduce to a factual basis suitable for analysis. Therefore, the general service analyst, with limited time and resources, can most conveniently draw the line here, leaving human relations problems to the manager who has had long and intimate contact with the people concerned or to such specialized agencies as may be available.

Management Analysis in Government

1. The Need for Management Analysis

The need for management analysis in both government and private industry arises from the limitations in the capacity of managers.

These limitations, at any particular management level, may be due to (1) the lack of management education for the most effective *day to day* performance of the job at that level, or (2) the lack of specialized education and experience in one or more aspects of management necessary *occasionally* on the job at that level.

The limitations under (1) above can be dealt with by appropriate recruitment, selection, training, and pay to meet the day to day requirements at the various managerial levels. The more appropriate they are, the less need there will be for management analysis.

The limitations under (2) above can be achieved most economically by acquiring just that amount of specialized assistance as and when

required. The requirements at various management levels, when added together, form the basis of justification for the size and type of management analysis service which should be established outside the organization concerned or obtained from outside.

The need for management analysis is greater in government enterprise as against that in private enterprise because of the less concentrated interest, initiative, and action of the "shareholders" and the limited use of yardsticks such as profit and loss statements.

2. O & M versus Private Enterprise Services

O & M units differ from private enterprise units in several ways. Firstly, the service is provided by civil servants chosen for their knowledge and experience in both business and civil service operations. As they are civil servants, there need be little or no restriction on the scope or nature of their investigations where public interest is involved. Secondly, the survey reports need not be merely a series of recommendations as a result of analysis, but can be designed as far as possible to approximate operating manuals. In other words, their work can be made an integral part of the operation surveyed. The third important difference is that the service does not have to be paid for by the department and therefore will be used more freely.

3. The Limitations of an Advisory Service

When the analysis is done by a management analyst rather than the man on the job and when the men on the job are scientists, professional men, or highly-skilled workers, a special problem arises because the management analyst as such does not know all the scientific or technical implications which will be found in the management procedures used. To meet this situation the management analyst would have to be either highly qualified himself in the science, profession, or skill involved, or would have to work with a suitably qualified colleague. Similarly, the scientist, professional man, or highly-skilled worker should recognize that in spite of all his knowledge and experience he may not know very much about the bases of sound organization and good management, and that for this reason his greatest contribution may be made if he is "on tap" rather than "on top".

This raises an important point in connection with a government advisory service. Government departments, branches, and divisions are usually set up to perform a specialized task as defined in a statute or order which is the foundation of their existence. Scientific or technical specialists are usually called upon, only because they are specialists, to organize and manage these operations, and they may have limited managerial ability. Furthermore, because these men are specialists in their

field it would be most unusual for them to ask that their operations be submitted to any other examination than their own.

The above is one reason why O & M service in the government tends to concentrate on anything but what may be called the statutory functions. This leaves the administrative or ancillary services, such as financial accounting, purchasing, storekeeping, inventory control, personnel records, office services such as stenography, typing and duplicating, and filing, etc. It is in these activities that the O & M advisory service finds its greatest initial demand. A second reason for the concentration is that these services are usually directed in whole or in part by administrative officers who, in many instances, have had special training and experience to give them a keener appreciation of management analysis. A third reason is that when the administrative services are poorly managed, no matter who is in charge, there will be constant complaints from all who depend on them, and an impartial O & M survey has much in its favour.

While it must be accepted that O & M work in government service has the above-mentioned limitations in its beginnings, its rate of advancement to date would indicate that it will not be long before it reaches the scientific, professional, and skilled services in the government.

4. The Process of Doing an O & M Survey

The process of doing a job in an O & M advisory service can be divided roughly into ten stages:

(i) The attitude of the O & M Officer, while not strictly speaking a "stage" of a survey, is so important throughout all stages that it should be mentioned first. Firstly, he should aim at avoiding personal issues. Secondly, he should aim at extracting the maximum factual information in the shortest possible time. Thirdly, he should maintain a questioning attitude on every major and minor finding.

(ii) The initiation of the O & M survey should come from within the department concerned because (1) as a matter of courtesy, advice should not be given before it is asked for and (2) if the department is not interested in asking for a survey, it is not likely to do much about the results. The initiation should also come from a level at which there is authority over the whole activity to be surveyed.

(iii) The terms of reference should be very clear and well defined so that there will be no misunderstanding as to the scope, nature, and object of the survey. Loose thinking at this stage can cause untold waste of time and effort and unhappy relationships as the survey progresses. The terms of reference should be put in writing, preferably in the official letter from the department asking for a survey to be made. This letter of request should be signed by the head of the department or agency concerned (1) to ensure that he will know exactly what outside services

are being used, (2) to advise him of what problems are being actively dealt with, and (3) to provide the departmental blessing and authority on the use of the service.

(iv) The objective of any department, branch, division, unit, and every procedure and method is the reason for its existence. Naturally, the objectives of a department or an agency may be found in legislation, a complexity of regulations, and a series of policy statements. If the activities are to be justified, the objectives must be examined so that it can be determined whether or not the outcome of all the activities achieves the desired result with a minimum of effort and expense.

In some instances it may be found that certain activities do not contribute anything to the objectives and therefore could be abandoned. In other instances confused objectives may be hindering activities. These must be reviewed and improved. The objectives may need scrutiny with a view to determining whether or not they themselves can be fully justified. The terms of reference should tell the O & M Officer how far he should go in this.

(v) Fact finding in an O & M survey is like drawing a picture to represent the management, showing the main outline and emphasizing certain characteristics, each with the degree of detail and shading necessary for closer examination as may be required.

Knowing how to get at the facts primarily involves knowing how to get the complete cooperation of the people in the organization being surveyed. They know the facts better than anyone else.

Knowing which facts are significant is an important matter because the O & M Officer has a relatively limited time on the survey, and he must be able, in this limited time, to make representative selections from an infinite quantity and variety of information. His first aid in this matter is his own knowledge and experience in management functions. His second aid is a quick preliminary survey of the whole activity with a view to "spotting" the places where special attention may be necessary. His third aid is to concentrate his attention at the various management levels to see the extent to which standard management functions are being performed. If they are being performed well, subsidiary problems will automatically be brought to attention and solved without any O & M assistance.

Ensuring the quality of facts is important because they are the foundation of the conclusions and recommendations. It is not difficult to do this when documentary information is collected, but when information is gathered by word of mouth it should be double checked at least.

(vi) Drawing conclusions is a process that may be going on during the fact finding, but it is not completed until all the fact finding has been

completed. The chief characteristic of the process is the use of the scientific method and of certain principles of management.

Furthermore, it does not follow that a mere statement of the solution is enough. The O & M Officer is an advisor, but the manager, who is to accept his solution, must continue to assume full responsibility for the work in hand. Therefore, the analyst, in drawing his conclusions, must be able to identify and set out in writing the process of reasoning which leads to the solution.

The O & M Officer in most instances must do more than the private analyst to assure full acceptance and correct application of the solution. He must often develop his solution in considerable detail and also lay out a program of implementation. There are three reasons for this. Firstly, the O & M Officer is fundamentally a member of the same "firm" and as there is usually no question of costing his service for a profit and subject matter as well as the process of reasoning involved in the detailed development of the solution, it will be more economical to allow continuity of his thought and action by letting him develop details of the solution than to cause a break in the process. Secondly, there are not the same pressures from above or the same incentives to make operations more efficient. The more detailed conclusion will make implementation easier and therefore more readily acceptable. Thirdly, promotion by seniority has more scope than it does in private enterprise, with the result that positions of managerial responsibility are more apt to be filled by people who have little qualification or experience in management and welcome detailed conclusions.

(vii) Making recommendations involves the preparation of a concise statement indicating sharply and clearly what action is to be taken. This may form a convenient checklist for follow-up action on implementation.

(viii) Stating the effects, even though they are usually implied if not specifically stated in the process of drawing conclusions, gives the manager a convenient and quick indication of the significance of each recommendation.

(ix) The report gives (1) the terms of reference, (2) factual information, (3) conclusions, (4) recommendations, and (5) statement of effects.

The extent of detail must be decided by the O & M Officer, guided by his assessment of the people who will have to read and follow the report. Of the rest of the report, factual information is the only other item that might make the report unnecessarily bulky. Here again there is perhaps a difference between the O & M report and those produced for private enterprise. Again because of the limitations of management

in government service, it is more necessary to report at least some of the more outstanding factual information to illustrate and emphasize the inadequacy of present operations.

Another feature of O & M reports, as distinct from management reports in private enterprise, is the style of writing. Through the analyst's constant contact with other civil servants and what might be called the "officialese" style of writing, his report can easily become ponderous and turgid to the extent of obscuring the issues involved. On the other hand, through his reading of management literature his report can become breezy and perhaps careless to the extent that it will annoy the reader and influence him unduly against the substance. Therefore, if the full value of observations, logic, and scientific method are to be extracted, the writing must strike the happy medium and be accurate, clear, and simple, with a good measure of dignity.

The clearance of an O & M report requires special consideration again, largely because of the characteristics of management in government service. Although the condition may be changing rapidly, it is not difficult for an outsider to get evidence to show that top management in government service, for the most part, is not well informed of subordinate activities. It may often be found that a branch operates more independently of the department or that a division operates more independently of a branch than would be the case in private enterprise. There are sometimes what seem to be very reasonable explanations for this. One branch or a division may be operating under separate legislation. In addition, with the occasional shuffles which take agencies, branches, or divisions away from one department to put them under another, there is a tendency for the independence of operations to become crystallized. Furthermore, there is the fact mentioned before, that the quality of management may be poor at various levels.

These conditions tend to "balkanize" the various divisions, sections, or units (and sometimes the employees) and are usually predominant enough to make it a general rule for the O & M Officer to discuss his conclusions with appropriate officers at all levels with a view to achieving agreement on the proposals. To let them read the part of the draft report concerning their activities, to see that the draft most fully acknowledges their cooperation and contributions and to ensure that the draft does not in any way reflect discredit on them personally will usually assure successful implementation before the report is finished and forwarded to the head of the department.

(x) Implementation is the job of the department, although it is of considerable interest to the O & M Officer. When the report has been officially transmitted to the head of the department, the question arises as to how far the O & M Officer should go in assisting with the implementation. It has been shown that the conclusions, including the proposals,

should be developed and reported in sufficient detail to tell the operating staff what to do and how to do it, having due regard to the quality of the management available.

Assisting in actual implementation, however, has two unpleasant potentialities. It may encourage laziness or irresponsibility on the part of operating staff and it is apt to get the O & M Officer involved in management aspects which are none of his business. The O & M Officer should, however, follow up frequently on the progress of implementation so that he can advise in any particular detail or in any unforeseen difficulty.

Some Typical O & M Assignments

1. An examination of procedures, methods, and facilities in connection with the procurement, storage, and distribution of stationery and supplies.

2. A survey of the organization, procedures, and methods in the — Records Division with a view to recommending improvements and with special reference to the feasibility of partial consolidation with the Central Registry of the Department.

3. A study of the organization, procedures, and methods of the — Division and a general examination of closely related functions performed elsewhere in the Department.

4. An examination of the administrative service activities of — Division to determine how operations would be affected by the removal of this Division to — Branch.

5. To set up a production control system in a small stenographic and typing pool in — Branch and to survey all other stenographic and typing services used in the Branch to determine the possibilities of increased economy by extending pool services.

6. A study of the Records Division — Branch "X" Department to ascertain the nature of the statistical information produced, the use made of it, and the extent to which compilation methods and end results are duplicated by "Y" Department.

7. To study the office space made available to — Branch and the principal features of the work requirements of that Branch with a view to developing office layouts which will be conducive to satisfying all requirements and using space most effectively.

8. To examine the departmental policy, organization, and procedures for the handling of security matters with a view to making recommendations to eliminate unnecessary records and non-essential work.

The Significance of O & M in Government

Sufficient has been said to support an earlier statement that the advisory service such as an O & M unit gives is fundamentally only an

aid to management. It is limited to that part of management which can be reduced to relatively concrete factual data. Further limits are imposed by the limits of the O & M Officer's knowledge and experience in the operation being surveyed.

The question arises as to what extent an O & M unit should be a general service and to what extent it should contain specialists, that is, (1) O & M Officers with a degree of professional training as well as training and experience in management, or (2) O & M Officers specializing highly in one aspect of management.

Firstly, so long as the O & M unit consists of officers with general training and experience, it will always be an indication that management in the operating departments could be improved, because good managers do their own management analysis in the course of operations. Secondly, in government organization there are many units of scientific, professional or technical activity (for instance, chemical laboratories in various departments) which, being relatively small, could not warrant the employment of an O & M Officer specialized in their field. These units could be classified roughly into, say, a dozen groups (such as chemistry, law, photography, etc.), each consisting of two or more units of a similar nature (for example, structural and civil engineering). Similarly, in the administrative services of different departments or agencies there may be relatively small units of accounting, filing, stenographic services, etc. which are not big enough to justify keeping highly specialized management. As the units may be under different department heads, there would be, even under the very best general management, a place for a supplementary and specialized management service which could make its maximum contribution if located at a central point and at a sufficiently high level to be well directed and freely available without prejudice or favour to all parts of the government service.

The two instances given above are perhaps extremes, but the underlying principle of each should be constantly kept in mind in the organization of an O & M service. The requirements for most governments can be met at a point somewhere between the two, depending on the conditions of management in the particular government at a particular time. The more that general management is improved, the more the O & M service will be a specialized service and the more it should be centralized at higher levels.

In actual fact, the position of an O & M service in the government organization is a problem which has been dealt with in a variety of ways. In some instances departments or agencies set up their own O & M services, sometimes attaching them to one or another of the operating branches and sometimes directly to the head or deputy head. In other instances O & M units, serving all departments, become attached to one

department which exercises certain controls on certain operations of others. For example, in the United Kingdom an O & M services operates under the Treasury, while in the Government of Canada an O & M service operates under the Civil Service Commission. This variety in practice tends to obscure the fundamentals on which some clarification is attempted below.

Firstly, following the previous argument, the existence of general O & M units in many places is not necessarily a bad thing in itself, but is indicative of (1) some interest and action being taken to improve conditions and (2) the need for better management. Secondly, if O & M is to be a more specialized service to fill unavoidable gaps in the management requirements of separately operated and specialized units, it should be at the highest level in the whole organization so that it can serve all parts.

Thus O & M, if properly placed in government organization, if carefully adjusted to the needs of the component parts of that organization, and if intelligently used by these component parts can well help our government to skillfully effect its many assignments.

Book Reviews

COMMERCIAL TREATIES AND AGREEMENTS: PRINCIPLES AND PRACTICE,

by Harry C. Hawkins. Rinehart and Company, Inc., New York, 1951. 242 pp. $3.50.

This is a very good treatment of the subject. Mr. Hawkins is thorough but concise. He has written clearly and simply without shirking the difficult problems of theory involved, and has remained eminently sane and practical in offering constructive suggestions. He is sympathetic towards the difficulties and problems that have motivated governments in adopting restrictive policies without concealing or minimizing the bad effects of such policies.

If one part of a uniformly good analysis must be picked out for special merit, my choice would be the chapters on the most-favoured-nation clause. The treatment is somewhat wider than the title would indicate; indeed it covers most phases of tariff and commercial policy, but this is to be counted as a merit since commercial treaties are part of general trade policy.

Another feature of the book that particularly pleased me was the generous recognition of the contributions made to the book by students in the Fletcher School of Law and Diplomacy. Readers of *The Quarterly* will be glad to find among these the name of one of our U.W.O. graduates, Mr. Grant Davy ('49).

I found this book reassuring in two ways. In the first place, in an age when nationalism has so nearly ruined the world, and in a field in which nationalism is at the root of so many problems, it is gratifying to find an author who holds unswervingly and unflinchingly to the best traditions of the great liberal economists and consistently upholds the general welfare of mankind as the only correct criterion for policy. In the second place, in a period in which it seems to be fashionable to decry moral considerations and to advocate narrow national self-interest as the only basis for policy, it is good to find Mr. Hawkins condemning certain policies on moral grounds.

A few minor criticisms might be made: the "restricted M.F.N. clause" is not well explained; insufficient weight is given to the political considerations which are usually the major motives in tariff preference schemes; the case against preferences and in favour of customs unions

is not well made. I would also question the criticism of tariff bargaining on the ground that it strengthens protectionist sentiment by treating reductions in the tariff of a country as "concessions". It has that *tendency,* but there are times when the treaty method is the only politically feasible way of reducing tariffs. Two notable examples illustrate this point: the network of treaties negotiated by Napoleon III and the Hull Trade Agreements Program. However, these are minor defects in a very good book.

Indeed, I like the book well enough to wish that there were a little more of it—an analysis of the historical trends within which the problems of commercial policy have arisen.

The early period of tariff making and unmaking, say from Adam Smith to the treaty system of Napoleon III, was characterized by a general acceptance of the optimistic doctrine of harmony of interests and by a growth of cosmopolitanism; tariff reform was a matter of fighting ignorance. In the period culminating in the Hitler regime, the idea of conflicting interests grew to dominate thinking, and policy began to aim at self-sufficiency and at taking advantage of strong bargaining positions. We are now in a confused period in which nationalist policies are being countered by the feeling that the threat of communism can be met only by cooperation among the nations of the free world.

The author shows that he is aware of these aspects of the subject; his treatment of the newer forms of controls, of internal regulation, and of state trading, as well as of Nazi trade policy, is evidence of this. Nevertheless, I think it would have been worth a few extra pages to make the matters explicit.

—W. B. Harvey
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PUBLIC SPEAKING FOR BUSINESSMEN,

by William G. Hoffman. Third Edition. McGraw-Hill Book Company, Inc., New York, 1949. 405 pp.

Professor Hoffman's revised edition of *Public Speaking for Businessmen* has been designed to offer assistance primarily to the vast majority of business executives who, though never likely to be called upon to perform important public speaking roles, must nevertheless from time to

time appear before critical audiences. To most this is a frightening and often frustrating experience. Yet the development of some facility for speaking before a group, even if it consists only of a small number from within the organization, is becoming increasingly important. As the author says, "The executive who cannot speak with authority and skill in a conference, before a group of associates, or a Board of Directors, at a dinner or convention, is failing in a major responsibility."

Professor Hoffman's book serves two important purposes. It is written in such a manner as to be particularly helpful to the businessman who must develop his public speaking ability from scratch. To be sure, "practice makes perfect", but there is an abundance of guidance for one who will make a real effort to apply the "do's and don'ts" set forth by the author. Quite aside from advice in the area of speech delivery, there is much helpful guidance in such tasks as choosing a subject, organizing a speech, etc. In other words, the text might well be found on the shelf of every businessman's library.

On the other hand, the writer sees no reason why this book could not serve as a very useful college text book, especially in a School of Commerce where a course on public speaking is offered. The reproduction of famous speeches and the questions and exercises at the close of the chapters provide much scope for classroom discussion and work assignments

All in all, the book should enjoy wide readership. It has much to offer on a subject with which many of us concern ourselves sooner or later. Furthermore, it is written in a most interesting manner, and no one should find the book dull in any sense of the word.

—L. W. Sipherd, Dean
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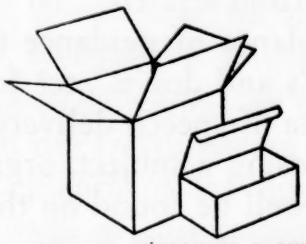

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